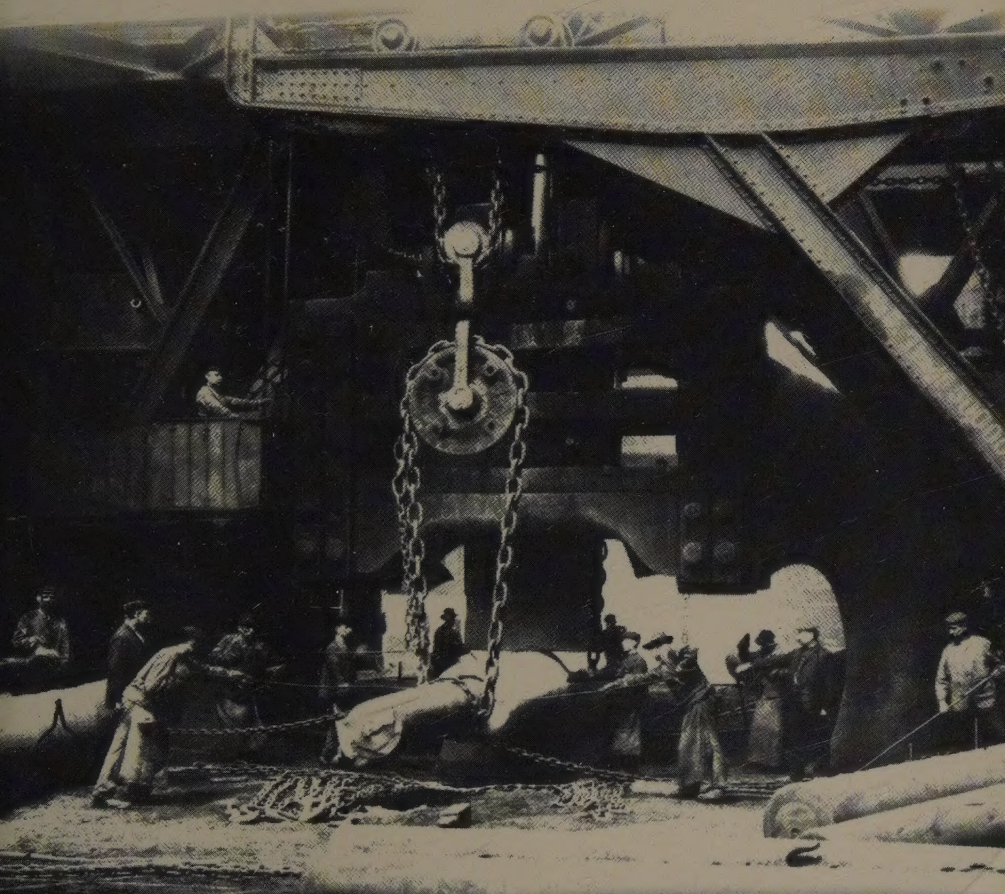


Industrial Culture & Bourgeois Society

*Business, Labor, and Bureaucracy
in Modern Germany*



Jürgen Kocka

Industrial Culture and Bourgeois Society

Bourgeois Society

Industrial Culture and Bourgeois Society
Modern Culture and Bourgeois Society

Industrial Culture

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INDUSTRIAL CULTURE AND BOURGEOIS SOCIETY



*Business, Labor, and Bureaucracy
in Modern Germany*

by

Jürgen Kocka



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Introduction



The Quest for an Integrative History of Industrial Society

Volker R. Berghahn

One of the more regrettable developments in history as a scholarly discipline has been the institutional separation of economic and business historians from the rest of the profession. In many Western countries, the origins of this separatism go back to the emergence of economic and business history as a distinct genre in the late nineteenth century. It was in those years that the historians of politics and diplomacy, exploiting their dominant position in the faculties of the major universities, refused to integrate into their departments colleagues interested in the history of agriculture, commerce, and industry. Wedded to the nostrums of Leopold von Ranke and other founding fathers of modern historiography, who had been holding that the peaks of human history, as represented, in their view, by the great men of state and by the great nations of the world, were the only appropriate objects of study, the orthodox historians chose to ignore the momentous changes that the infrastructures of the Great Powers had undergone since the late eighteenth century. Their blindness still seems remarkable; for as they were concentrating on the alleged "peaks," industrialization, urbanization, and a population explosion had fundamentally transformed the "valleys" – a development barely registered in their writings.¹

In the late nineteenth century when some colleagues finally criticized this tunnel vision and proposed the study of the growth of industry and commerce, they were received with disdain and derision. The resulting

Notes for this section begin on page xvii.

separatism was most striking in Britain, the first industrial nation, where Oxford and Cambridge virtually closed their doors to the new genres and left it to the “redbrick” universities – founded in the second half of the nineteenth century in the industrial and commercial heart of the Midlands and the North – to create positions in the allegedly inferior fields. Consequently economic and business history came into being at the universities of Manchester, Liverpool, Birmingham, and Sheffield, either as part of emergent economics departments and business schools or as independent entities.²

The separation continued even after the Second World War, so that quite a few British universities, to this day, have “traditional” history departments, on the one hand, and, on the other, economic and business historians either as members of economics departments and business schools or in special economic history departments. The founding of the “glass plate” universities in the 1960s that professed interdisciplinarity and established “schools of study” as umbrella organizations for several disciplines was unable to bridge the gap. At the University of East Anglia in Norwich, for example, the economic historians found themselves in the School of Social Studies, while the other historians were divided, depending on their national specialty, between the School of European Studies and the School of English and American Studies. Although in 1970 the economic historians reinvented themselves as practitioners of a more modern “economic and social history,” this did not change the basic pattern.

The division being highlighted here with regard to Britain may not always have been as sharp on the Continent or in the United States, but it was tangible enough. In Germany, economic history emerged in a combination with social history since the nineteenth century. But typically it developed outside history departments, either as an independent entity or as part of *Staatswissenschaften*, *Sozialwissenschaften*, and later economics. In France, innovative historians around the journal *Annales* began to integrate economic history (as well as social and later cultural history) into their writings. But again, there developed and remained an institutional gulf between them and the history departments of the classical type. All too frequently, the superiority complex of the political historians was enormous, even in those places where all historians found themselves under the same roof. Across the Atlantic, the United States, with its huge system of higher education, presented a more varied picture. But even where economic and business historians were integrated into the main history department of a particular university it often was difficult for them to find discussion partners among their colleagues.

To some extent the gulf was not due only to the divergent subject matters they dealt with but also to the analytical tools they deployed.

Economic history retained a firmly quantitative orientation. Its protagonists collected and evaluated statistics on growth, production, consumption, and investment, either globally or at the level of individual companies. A pertinent example may be found in the literature on the reconstruction of the West German economy after the Second World War. Some of it makes rather arid reading, indeed, dealing – usually in the passive voice – with questions of wartime capacity destruction and latent production potential.³ At one point the argument came to revolve around figures on electricity consumption to prove or disprove that early postwar German industry was fundamentally prepared to experience rapid growth in the 1950s.⁴ This insistence on the use of “hard” and “objective” data further complicated relations with the rest of the community of professional historians, who were interested in more intangible factors, although occasionally it led to animated exchanges, as, for example, in the debate on whether living standards rose or fell during the Industrial Revolution in the nineteenth century.⁵

When political and diplomatic history later became complemented and to some extent even superseded by the new genres of the 1960s and 1970s – the history of daily life, ethnic groups, gender, and high and popular culture⁶ – the resultant pluralism occasionally facilitated the reformism of a new generation and led to efforts to “bring home” the economic and business historians. These efforts did not get far.

In light of the hostility of many older-generation political and diplomatic historians to the growth of the new genres and to the experimentation with postmodernism and poststructuralism, it is interesting that secessions of the kind that had once produced economic and business history departments in the late nineteenth century did not recur a century later. Fortunately, further organizational fragmentation was prevented. But the recent stress on culture and the historical work on mentalities and perceptions of reality – in extremis the postmodern conflation of fact and fiction, for example, in Simon Schama’s *Dead Certainties*⁷ – has not helped those who have been arguing for a reassembly of all historians under one roof. Not even business historians’ discovery of the phenomenon of a “company culture” has furthered a rapprochement. If anything, the gap between the practitioners of cultural history in its different forms and the economic historians has recently grown wider, as the relative status of economic history, at least in its perceived relevance for historians in general, has declined. A recent example of this gulf is Richard Pells’s *Not Like Us: How Europeans Have Loved, Hated, and Transformed American Culture since World War II*.⁸ This wide-ranging history of mass consumption and of American cultural impact on postwar Europe makes occasional references to Fordism and the power of American industry and commerce. But it is

scarcely aware of the relevant literature in economic and business history, even though it would have greatly benefited from the inclusion of the productionist perspective.

And so the thousands of historians around the world continue to congregate in different associations, often blissfully ignorant of useful complementary work that is going on across the fence. It is still difficult to imagine what a cultural historian of mass culture and an economic historian of mass production might have to say to each other. But maybe they do have a lot more to compare and talk about today than in the past; maybe it is time to build bridges instead of celebrating difference. The scholar whose more important essays on "Industrial Culture and Bourgeois Society" are collected in this volume has certainly long held this view and devoted himself to the task of reintegration.

A brief glance at Jürgen Kocka's academic career will show how he arrived at this view. In the 1960s he studied history, political science, sociology, and philosophy at the universities of Marburg, Vienna, Berlin, and North Carolina at Chapel Hill, obtaining a Master of Arts in Political Science from the latter institution in 1965 and a doctorate in history from the Free University in Berlin four years later. He completed his *Habilitation* at Münster University in 1972. In 1969/70, he held a fellowship from the American Council of Learned Societies to work first at Harvard's Charles Warren Center of American History and later at the Harvard Business School. He assumed a full professorship at Bielefeld University in 1973 before moving to a chair in the History of the Industrial World at Berlin's Free University in 1988. In addition he became a permanent fellow of the Berlin *Wissenschaftskolleg*. Between these appointments, Kocka held fellowships and visiting professorships at Princeton, Chicago, New York, Jerusalem, Budapest, Stanford, and Paris. He is editor of several journals and monograph series. He helped launch research institutes in Berlin and Potsdam, holds an honorary doctorate from Rotterdam's Erasmus University, belongs to three European academies, and was awarded the prestigious Leibniz Prize in 1992.

But however extensive his international travels and nonresearch activities, they have not stopped Kocka from publishing numerous books, edited volumes, and articles on a wide range of topics. His M.A. thesis examined the financial relations between the West German federal states and the Bonn government in comparison with the same interaction between the U.S. government and the federal states.⁹ He has pursued this early interest in comparative history in a number of subsequent studies, most notably in his influential *Angestellte zwischen Faschismus und Demokratie: Zur politischen Sozialgeschichte der Angestellten: USA, 1890-1940 im internationalen Vergleich*, translated as *White-Collar Workers in America: A Social-Political History in International Perspective*.¹⁰

In the meantime he had added two further strings to his bow: business history as well as the history of the German working and middle classes and their formation in the nineteenth century. His voluminous history of the electrical engineering firm Siemens from 1847 to 1914 started, at its most basic level, from the assumption – none too popular among cultural historians today – that the production sphere influences all non-economic aspects of modern life.¹¹ Kocka then tried to link this hypothesis to Max Weber's theory of bureaucracy, arguing that both modern bureaucratic administration and capitalist production are driven by the need and quest for calculability and the rational disposition of resources. As he put it, his study of Siemens wanted to examine, by reference to Weber's categories, "the transformation of a capitalist industrial enterprise in the late nineteenth and early twentieth centuries in its consequences for the relationships of authority and organization, with regard to the genesis and implementation of entrepreneurial decisions, to production and market behavior, as well as to the role and situation of employees."¹²

In line with this program, Kocka studied the growth of Siemens from the perspective of its gradual bureaucratization. To some extent, he saw this process as part of the transformation from a small-scale family-based capitalism toward an anonymous and highly organized capitalism with its own stratifications not only at the level of production but also of management, marketing, finance, and R&D. But Kocka also tried to relate the rise of the "private civil servant" (*Privatbeamter*) and the new hierarchies, which valued loyalty to the company more highly than individual drive, to the tradition of the Prussian public bureaucracy and the political culture that took root in Central Europe. However, he was circumspect enough to be interested not merely in the affinities and overlapping practices between public administration and industrial organization but also in the evolving differences between them. His book therefore is also about how, as 1914 approached, industrial bureaucracies, unlike their public counterparts, increasingly were exposed to the harsh winds of competition. Consequently, efficiency and *Leistung* became more important than loyalty. In other words, if in state administration the growth of bureaucracy was a means of exerting authority, industrial bureaucratization was a means of securing the company's prosperity.

Nor did Kocka see Siemens as an abstract entity run by an anonymous industrial bureaucracy. Rather, he was also interested in the mentality of its growing and increasingly differentiated work force. He found an early differentiation developing between blue-collar workers and white-collar employees. The role of the latter in the company did in many ways resemble that of civil servants, and the behavior and attitudes

of the *Angestellte* also invited comparisons. After all, they were officially called *Privatbeamte* and Siemens attached considerable importance to their loyalty to the company. Yet here, too, discrepancies arose. As the archives revealed, it was the principle of efficiency and *Leistung* that drove the two types of civil servants apart. White-collar employees, it is true, were salaried experts operating within a hierarchical and rationalized administrative structure; but the criteria by which they were increasingly judged and rewarded were less and less those of seniority and loyalty. Since bankruptcy was the ultimate threat hanging over a private company in a competitive world, efficiency assumed a significance that it never gained in the state apparatus, at least not before 1914.

All in all, Kocka's study of Siemens therefore broke new ground both in its combination of quantitative and qualitative analysis, its broader theory-inspired conceptualizations, and its move toward cultural history. The book's major arguments have lost nothing of their paradigmatic value for the study of the modern enterprise in its larger context. Some of its hypotheses are to be found in his 1971 essay on "Family and Bureaucracy in German Industrial Management, 1850-1914," reprinted in this volume.

Kocka's interest in Max Weber and the rediscovery, in the 1960s, of another founding father of modern social science history, Karl Marx, then led him into an experiment that added another dimension to his quest for an integrated history of industrial societies. This quest is best reflected in his 1973 study of Germany's *Klassengesellschaft im Krieg*, translated as *Facing Total War*.¹³ Conceived more as an essay in the original sense of the word, Kocka tried to test the Marxian hypothesis of the evolution of capitalist-industrial societies from the stage of class opposition and tension to confrontation and finally to open class conflict. He believed that this model could be used "for the analysis of realities in Germany between 1914 and 1918."¹⁴ However, he did not assume that the match between model and reality would be perfect. On the contrary, he accepted from the start that there were also tensions and conflicts of a non-class nature – including confessional, regional, and generational ones – which cut across class lines. Nevertheless, he assumed that class lines in wartime Germany increasingly came to overshadow all other divisions, as the world conflict escalated into total war. Confessionalism, regionalism, and so forth receded into the background both objectively and in the subjective perception of millions of Germans. Classes became more homogeneous and the dichotomy between the working class and the middle class more marked.

However, Kocka did not undertake the testing of his hypotheses as a confirmed Marxist who expected to verify Marx's theoretical predictions. Rather, he used Marx's framework as a Weberian ideal type, that is, as an

"intellectual construction for the measuring and characterizing of individual contexts that are significant in their singularity."¹⁵ By using Weber's ideal type as the propellant of his inquiry, Kocka showed an explicit willingness to discover and accept divergences from the ideal-typical construct. While Kocka did not accept Karl Popper's notion that the scholar's effort should be geared to falsifying hypotheses as a way of discerning viable ones and of discarding the rest,¹⁶ his approach nevertheless provided him with greater intellectual room for maneuver in that it allowed him to free himself from the stranglehold of Marx's teleology. His aim was to measure the distance between his model and wartime reality. And even if he found this distance to be considerable, such a finding, in his view, did not undermine the usefulness of his methodology. On the contrary, its usefulness, he believed, was enhanced by his procedure.

Accordingly he came up with a much more differentiated picture of the development of class relations in wartime Germany and the origins of the 1918 revolution than was to be found in earlier work; this can also be seen from his article on "The First World War and the 'Mittelstand': German Artisans and White-Collar Workers," reprinted here. He also found that the role of the state in this period did not fit orthodox Marxist assumptions: the government was not a pawn in the hands of big business but assumed the role of a mediator between employers and trade unions. It is probably correct, as critics have argued, that Kocka's *Klassengesellschaft im Krieg*, though billed in its subtitle as a social history of Germany, was still primarily a "top-down" analysis, partly defined by the limited range of sources he was able to draw upon. Critics also have suggested that a span of five years of total war may be too short to measure shifts toward open class conflict and that his premises underestimated the forces of political cohesion that obviously also were at work and clearly kept German society from falling apart earlier.

Notwithstanding such conceptual problems, the book represented a challenge and an invitation to other historians of political economy and society to seriously study the social history of the First World War. The book stimulated fresh research that more firmly approached the experience of those traumatic years from the perspective of ordinary men and women. Meanwhile, this research has expanded into the sociocultural field to capture the life and attitudes of millions of men in the trenches and of even larger number of women and children who survived the catastrophe on the home front. It is probably no exaggeration to say that in this sense Kocka's essay also influenced the work on other European participant nations, such as Jay Winter's important studies on wartime mortality, bereavement, and memory.¹⁷

No less important, Kocka's interest in class and class conflict meanwhile had turned him back to the period of early industrialization. This

time the focus was not on the emergence of the modern firm and business history, nor the quantitative social and economic history of growth, living standards, and mobility, but the history of the rise of the German industrial working class. Again the questions he raised were inspired by both Marxian notions of class as an economic category and Weberian conceptions of class and status in terms of cultural behavior and contemporary perceptions of social stratification. His 1980 essay in the French journal *Mouvement social*, reprinted here, neatly summarizes his concerns during this period, complemented, as they had become, by a renewed interest in the German middle classes.

Kocka became the driving force behind a major interdisciplinary and comparative project based at Bielefeld University and its Center for Interdisciplinary Research that studied not only Europe's industrial and commercial bourgeoisie in the nineteenth century but also included the history of the professions and the educated and intellectual elites. Published in Germany in three volumes in 1988 and selectively translated in a one-volume study, titled *Bourgeois Society in Nineteenth-Century Europe*,¹⁸ this collection was partly a response to a growing criticism that social historians, in their preoccupation with the fate of the working class during the Industrial Revolution, had badly neglected a class – the bourgeoisie – that probably shaped the nineteenth century even more decisively than the proletariat.

It is against the background of this shift that the last two contributions to this volume must be seen. "The Difficult Rise of a Civil Society," in particular, encapsulates both Kocka's enduring preoccupations and the expansion of his historiographical interests to include genres the original design of his "history of society" had underplayed or completely ignored. The article also offers an insight into the underlying philosophy and basic political assumptions that inform Kocka's writings. It is the belief in and defense of the Enlightenment project and its tendential universalism from a social democratic-liberal base. The word "tendential" is important since there was a time in his academic life when this universalism was simply taken for granted. As critics pointed to the glaring gap between the universalist claims and the de facto exclusivism of nineteenth-century bourgeois liberals, he came to admit more openly that "it took two centuries to reduce this discrepancy, which was most effectively challenged by the socialist labor movement and Marxist criticism, later by the feminist movement, and by liberal-democratic reformers throughout the period."¹⁹

And then he added yet another twist that, he believes, enables historians to connect the normativity of the Enlightenment project with scholarly research. For "What has been and continues to be a normative concept with political, social, economic, and cultural reach can be refor-

mulated as an ideal-typical concept and used for analytical purposes."²⁰ It is this Weberian thread that runs through so much of Kocka's work and enables him to build bridges between individual disciplines and historical genres as well as between different national cultures. At a time when many economic and business historians continue to plow traditional methodological furrows and when cultural historians increasingly have lost all interest in the economic sphere; when the former show little concern for the role of mentalities, perceptions, and barely tangible sensibilities in human behavior, the latter ignoring the realm of production and material conditions; when one side assumes that being determines consciousness, the other postulating that consciousness defines our existence, it may be useful to remember and study the interdependencies to which the founding fathers of modern sociology and social history first drew our attention.

In this sense this volume therefore is also intended as a challenge to abandon persistent departmental separatism and, if nothing else, to restart a dialogue between those interested in economic and technological phenomena and those dealing with culture. Kocka's *oeuvre* shows ways this might be done profitably for all disciplines, genres, and countries involved.

Notes

1. See, e.g., G.G. Iggers, *The German Conception of History* (Middletown, CT, 1968).
2. See, e.g., G.G. Iggers, ed., *New Directions in European History*, (Middletown, CT, 1975).
3. See, e.g., C. Buchheim, *Die Wiedereingliederung Westdeutschlands in die Weltwirtschaft, 1945-1958* (Munich, 1990); W. Abelshauser, *Wirtschaft in Westdeutschland, 1945-1948* (Stuttgart, 1975).
4. B. Klemm and G.J. Trittel, "Vor dem 'Wirtschaftswunder': Durchbruch zum Wachstum oder Lähmungskrise?" *Vierteljahrshefte für Zeitgeschichte* 35 (1987): 571-624.
5. See, e.g., A.J. Taylor, ed., *The Standard of Living in Britain in the Industrial Revolution* (London, 1975).
6. See, e.g., D.F. Crew, "Alltagsgeschichte: A New Social History 'From Below'?" *Central European History*, December 1989: 394-407.
7. New York, 1992.
8. New York, 1997.
9. Unpublished manuscript, Chapel Hill, NC, 1965.
10. Respectively, Göttingen, 1977; and London, 1980.
11. J. Kocka, *Unternehmensverwaltung und Angestelltenschaft am Beispiel Siemens, 1847-1914* (Stuttgart, 1969).
12. *Ibid.*, p. 17.

13. J. Kocka, *Klassengesellschaft im Krieg* (Göttingen, 1978); *Facing Total War* (Cambridge, MA, 1984).
14. Kocka, *Klassengesellschaft*, p. 5.
15. M. Weber, "Die 'Objektivität' sozialwissenschaftlicher Erkenntnis," in idem, *Soziologie, Universalgeschichtliche Analysen, Politik*, ed. J. Winkelmann (Stuttgart, 1973), p. 246.
16. K. Popper, *The Open Society and Its Enemies* (Princeton, 1950).
17. J.M. Winter, *Sites of Memory, Sites of Mourning* (Cambridge, 1995). See also M. Eksteins, *Rites of Spring* (New York, 1989); P. Fussell, *The Great War and Modern Memory* (Oxford, 1975); G. Mosse, *Fallen Soldiers* (New York, 1990).
18. J. Kocka, ed., *Bürgertum im 19. Jahrhundert*, 3 vols. (Munich, 1988); idem, *Bourgeois Society in Nineteenth-Century Europe* (Oxford 1993).
19. Chapter 13, p. 281.
20. Ibid.

Chapter 1



From Manufactory to Factory

Technology and
Workplace Relations at Siemens,
1847-1873

Translated from the German by Belinda Cooper

“**M**anufactory” (in German, *Manufaktur*) refers to a large-scale centralized industrial enterprise with some division of labor, with a labor force largely on a contractual basis, but with no machinery. Enterprises of this type were frequent in the eighteenth century and the early nineteenth in textiles, metal work, and many other branches of industry. Factory (*Fabrik*) refers to a large-scale centralized industrial enterprise with an increasingly developed division of labor, a labor force largely on a contractual basis, and at least some kind of machinery in the form of either power machines (mainly steam engines) or machine tools. In the course of the Industrial Revolution, factories became the main type of industrial enterprise.

In some cases, factories were new enterprises founded on a mechanized and centralized basis. Frequently, however, factories emerged from other sorts of industrial enterprises. Many emerged from small craft shops. Numerous others developed from decentralized industrial enterprises of the cottage industry type (putting-out system), in which merchant-entrepreneurs coordinated numerous workers (for example, spinners and weavers) who worked primarily in their own homes according to the orders of the merchant-entrepreneur and delivered products at

previously determined prices. In many cases, however, factories emerged from manufactories. This is the way in which the Siemens & Halske factory emerged, later to develop into the largest electrical manufacturing firm in Germany. The following essay tells this story. Emphasis is placed on industrial organization, work relations, industrial management, and salaried staff.

Under a partnership agreement of 1 October 1847 between the craftsman Johann Georg Halske, the artillery captain Werner Siemens, and Werner's cousin, the lawyer Georg Siemens, the "mechanical shop" they planned in Berlin would serve "mainly for the manufacture and production of electric telegraphs, but without excluding other activities."¹ The founders chose the general partnership, a legal construct frequent in the mechanical engineering industry at the time. Werner Siemens surrendered his Prussian patent for the telegraph to the new firm, Halske contributed his ability to run an engineering shop, and Georg Siemens took it upon himself to "obtain the necessary funds": 10,000 talers, to be paid in three installments by Easter 1848, at 5 percent interest. In fact, however, payment of the third installment was prevented by the chaos of the revolution, so that the firm of Siemens & Halske (S & H) came into being with a capital of 6,843 talers.² In 1855, when Georg Siemens retired, Werner's brother Carl entered the business.

Production of electrical equipment in the period before 1867 was concentrated on the telegraph, signal apparatus (especially railroad signals), water quality gauges, installation materials, and medical equipment. Siemens's pointer telegraph was soon pushed aside by the Morse apparatus, which S & H began to build in the early 1850s. And the next major improvement in telegraph technology, the Hughes telegraph, which immediately converted signals into writing (produced by S & H starting in 1865), was not developed by Siemens, either.³ Clearly, the success of S & H in its first phase was not based, or at least not primarily based, on its own technical-development work.

Despite short-term gaps in liquidity, the firm did 32,008 talers worth of business from 1 October 1847 to 1 January 1850. Profit was 56 percent of total sales.⁴ In 1851, technical defects in the first line laid by Siemens precipitated a public scandal and a crisis between S & H and its major customer, the Prussian telegraph authority, which canceled all contracts with S & H.⁵ This extremely critical situation drove the firm to the brink of ruin, which Siemens survived through a detour into foreign markets, first in France, though without success, and finally in Russia. As a result of negotiations during Werner's trips, S & H took on the work of building and maintaining telegraph lines in the czar's empire.⁶ In 1853, Carl Siemens obtained a general power of attorney as manager with his own office and shop in Saint Petersburg; though its indepen-

dence subsequently grew, it was essentially run cooperatively by both brothers, although with Berlin retaining the upper hand.

The threat of war, and the war in the Crimea, accelerated the development of the Russian telegraph network.⁷ Starting in 1853, the business conducted via Berlin took a back seat to the business in Russia. While in 1851 sales figures still indicated Berlin's clear predominance (68,000 talers for Berlin, 12,500 for Saint Petersburg), by 1854 Saint Petersburg was responsible for eight times as much business as Berlin.⁸ Following the Crimean War, construction slackened, but residual contractual maintenance and service work ensured steady, high profits.

In the 1860s, the wave of success in Russia ebbed. Carl turned to risky enterprises having nothing to do with the industry and leading to great losses. In 1867, he left Saint Petersburg. However, this decline coincided with something of an upswing in the London business, which had been directed by brother Wilhelm Siemens as an agency since 1850. Wilhelm started to call himself William, and in 1858 the London branch became the independent subsidiary Siemens, Halske & Co. It had earned widely fluctuating profits since 1857 through the laying of submarine telegraph cables. This cable-laying business soon brought cable production in its wake, beginning in 1863 with a special plant in Woolwich, England. After conflicts with Halske, who disapproved of the risky cable business, the London office – legally independent of S & H Berlin – was run by Werner and William alone; on 1 January 1865, it was incorporated under the name "Siemens Brothers."⁹

These early foreign connections, based on family relationships, were decisive in securing the firm's overall success. While the Berlin telegraph shop's own sales played a secondary role after 1851, the shop was the planning and production focus of the firm's business dealings, which were conducted in Russia and England and thus remained relatively independent of the situation in Prussia. The firm's overall profits rose steadily despite the general economic crisis from 1857 to 1860, although the Prussian telegraph authorities were cautious about awarding contracts after 1851.¹⁰ Foreign receipts were crucial in securing the firm's continued existence.¹¹

Nevertheless, Werner Siemens seriously considered ceasing telegraph manufacture, which he considered a short-lived enterprise, and becoming more involved in projects outside the electricity field.¹² From the beginning of the 1850s, the telegraph manufacturing facility had been producing gauges, invented by William, that could be placed in pipes to measure water consumption.¹³ These "water gauges," completely unrelated to the sector, together with insulation material, for which there was always a demand, kept production going when the Russian business declined after 1860 and when London, while sometimes turning great

profits, was also reporting equally heavy losses or stagnation.¹⁴ The 1864 purchase of the Kedabeg copper mine in the Caucasus by Werner and Carl and other investment ventures also reflected their efforts to free themselves from dependence on electricity.

Thus by the mid-1860s, we find S & H in a phase of moderate stagnation and pessimism. While the early demand that arose with the appearance of the telegraph, especially from the government, had been satisfied, revolutionary new technologies that might have created new needs were yet to come. Telegraph production had ceased almost entirely following the lost war, the death of Czar Nicholas, and the outbreak in 1858 of a rash of business scandals in Russia,¹⁵ while income from maintenance contracts dwindled. The relationship with the London office suffered from organizational and personal difficulties, closely linked with the fluctuating situation there. Furthermore, S & H had lost its monopoly position. "The mistake," wrote Werner Siemens in 1861, "is that any mechanic, without capital or intelligence, can offer us significant competition."¹⁶ In the 1860s, in Berlin alone, two firms had taken to building telegraph and signal facilities.¹⁷ Despite minor improvements over time and efforts at new approaches, the innovations of 1847 turned out to be insufficient to ensure the enterprise a dominant position over the long term or guarantee the growth of the business.¹⁸

Until the events of 1866-67 revitalized the development of S & H and ushered in a period of rapid expansion and qualitative change, there was little progress over what had been achieved in the early years, so that the firm's first twenty years can be summarized as a relatively homogeneous and consistent period.¹⁹

The Mechanics' Workshop

Halske produced his first telegraphs and signal apparatus with roughly ten workers in a building rented for three hundred talers a year.²⁰ Werner Siemens lived on the ground floor; the shop occupied the second floor, and Halske lived on the third. Thus for the two heads of the business, the separation of living and work space had hardly been accomplished as yet. The workers, however, lived apart from their workplace from the beginning, at first mainly in Friedrichstadt or Hallesches Tor.²¹ Each floor consisted of six rooms and a kitchen. The area of the shop was 150 square meters.²² In 1847, it was occupied by three lathes, the only machine tools; there were no power machines. As the number of workers nearly doubled in the course of the year 1848, the neighboring apartment was also rented. The shop's capabilities were fully exploited, and rapid growth made it necessary in 1851 to move to a newly purchased

building at Markgrafenstraße 94.²³ Here Werner Siemens lived with his family before moving to a villa in Charlottenburg in 1863.²⁴

The front building in “beautiful 94” held not only apartments for the bosses’ families and some of the first employees but also several offices.²⁵ The courtyard, which served as a warehouse, separated it from the shops in the rear building, which consisted of a growing number of “halls” – six large and two small ones by the late 1850s.²⁶ “The lighting in the shops was quite inadequate: At first there was nothing but simple gas burners, equipped only in special cases with chimneys; later it was mainly petroleum. Heating was generally by iron (coke) stoves with long pipes.”²⁷ Little daylight penetrated to the low, generally very crowded, badly ventilated rooms.²⁸

While the Prussian mechanical engineering shops of the 1850s and 1860s already had specialized machine tools,²⁹ before 1870 S & H had only a few universal machine tools – lathes, small drills, and hand planing machines. The secondary role played by machines is indicated by the fact that the first steam-driven machine, an “iron worker,” as Werner Siemens called it, was not obtained until 1863.³⁰ The late date of this mechanization, which was not for financial reasons – given its Russian dealings, Siemens easily could have afforded the forty-eight hundred talers³¹ – indicates the artisanal nature of the work that prevailed in the shop, which employed little division of labor and required few tools and therefore few power machines, even when it employed as many as 150 workers. While a trend toward standardization could be observed in mechanical engineering in general at the time, it was completely lacking in the new electrical industry.³² Brothers William and Carl Siemens long pushed, in vain, for the introduction of standardized, cheaper methods involving greater division of labor. William, in London, in particular indicated his discomfort with the expensive, artisanally produced apparatus being sent from Berlin. He threatened to produce them himself or buy them at lower prices in England. He demanded “cheapness as our watchword.” The situation had to be attacked in an “industrial” fashion.³³

Indeed, rising competition and, partly as a result, sinking prices were reason and incentive enough to make production methods more efficient.³⁴ The fact that this nevertheless failed to occur to any significant degree prior to 1866-67 was closely linked to the fact that, at this point in time, S & H was producing primarily on order for individual customers rather than for the market. Since precise cost accounting was also lacking, it was difficult to recognize possible starting points for cost reductions. The sector’s technological immaturity also hindered early increases in efficiency, along with a certain conservatism among the workforce and some managers. The separation of manual and non-man-

ual labor in production had hardly begun yet. "Design drawings" – in broad outline and with no figures provided – were not completed and delivered to the shop but were sketched in direct collaboration between Siemens and a master craftsperson, or produced in the shop itself.³⁵ In general, construction followed cast models. "Through experiments, reality always went its own way and surprised the designers."³⁶

The workers, all of them male and predominantly skilled, were given additional training in telegraph construction.³⁷ Most of them had enjoyed extended artisanal apprenticeships.³⁸ In 1865, the vast majority were fitters and mechanics. "Watchmakers, lathe operators, etc. were in the minority."³⁹ During this period, as there were no more than 367 "Mechanici" in Prussia (1846), the telegraph manufacturing facility often suffered from a shortage of qualified workers.⁴⁰ Nevertheless, S & H did not begin targeted apprentice training until 1870, and did not conduct it to any great extent until 1890.⁴¹

It seems to have been this core of artisans that set itself against an increase in workplace efficiency through greater division of labor. From England, Carl Siemens told of German mechanics who (during cable production) were confronted with English "wholesale production": "In Woolwich, the German mechanics are occupied only with precision work, assembly, etc.; the English, however, always make the same part. That cannot be done with German mechanics, not even here. If a man like that manages to hold out for a month, he comes and says that he's getting sick of the whole thing and would like a different job. A worker who only knows how to work a specific part and earns his living that way would not say that."⁴²

Other examples also suggest that passive resistance by artisanally inclined workers and their masters slowed the speed of developments in the direction of division of labor that were desired in the interests of greater profitability. Werner Siemens himself complained of the "artistic dawdling" of the mechanics, whose earlier precision work had ruined them for "energetic and one-sided jobs."⁴³ Because a certain amount of division of labor was necessary to justify the use of machine tools, such resistance made it much more difficult to create the conditions that had to precede mechanization. Thus these industrial craftspeople slowed a development that would render them replaceable and their skills less important.

Carl Siemens, who judged first and foremost on the basis of profitability and was an unshakable proponent of the principles of capitalist thinking in the business, strove single-mindedly for independence from these "artists." "Once the gentlemen mechanics are replaced by servants, at least most of them, things will change."⁴⁴ The solid, craftslike quality of its workers and products that had brought the telegraph manufactur-

ing facility renown in its early years, when there was no competition and the expensive equipment brought roughly 40 percent profit, began to seem an obstacle to adapting production to advanced technical possibilities and the conditions imposed by emerging competition. In 1858, Werner wrote to Carl: "The shop has delivered only very minor proceeds. Prices are too low for artists' work, and the artistic gentlemen loaf too much."⁴⁵ Constant admonitions by the brothers William and Carl Siemens, who were concerned with efficiency and cost-cutting, and the fact that English production provided the same objects more cheaply, if less "artistically," and using greater division of labor, strongly suggest that, at least prior to 1870, S & H failed to achieve the maximum degree of industrial, labor-divided, efficient production that the state of technology and the character of the product would have permitted.

The artisanally oriented, skilled workers were not called "workers" but mechanics, fitters, and so forth, and overall "journeymen."⁴⁶ Only unskilled laborers were called "workers," and they were a tiny minority in the period under discussion. From 1860 to 1869, only nine such "working people" could be found among a total of roughly 150 workers.⁴⁷ They had no permanent work sites; instead, they were recruited as needed by different halls. Before the advent of steam-driven machines, they operated the hand cranks on machine tools.⁴⁸ Semi-skilled workers did not come into evidence until the period of advanced division of labor and mechanization after 1870, and the first female workers (lacquerers and winders) were not seen until 1871 and 1875.⁴⁹

One might expect that the great emphasis on workers' training, experience, and skill led to great differences in workers' wages based on qualifications, skill, and experience, and perhaps also age.⁵⁰ Nevertheless, in 1853, of thirty-four workers on a payroll, thirty-three earned fifteen silver groschen per day, while only one received twenty silver groschen. The only "shift supervisor" on the payroll received one taler.⁵¹ In July of the same year, wages fell as low as twelve silver groschen and six pfennigs per individual per day. In March 1854, seventeen workers earned fifteen silver groschen per day, while the supervisor still earned a taler. Both the lowness and the uniformity of these figures is noteworthy. From 1855 to 1867, skilled workers earned roughly five talers per week.⁵² In the early years, day wages predominated. Some workers, probably those who were older or better-situated, fitters and vice-supervisors (deputy supervisors), as well as newly appointed supervisors, were paid weekly.⁵³ Hourly wages increasingly became the norm, perhaps corresponding to the simultaneous reduction in work time and reflecting more precise expense calculations and increasing efforts to achieve profitability.

In 1858, for the first time, some workers were paid under a piece-rate system.⁵⁴ This was not widely employed before 1865 and began to catch

on to a significant extent only after 1870.⁵⁵ However, even in the 1860s piece wages were enough to promote wage differentiation among workers. Piece workers earned eight to nine talers per week.⁵⁶ A supervisor reported about this period: "People did not even want to become supervisors because of their high piecework earnings Piecework offers [i.e., rates initially offered by the management] were generally lower; the worker involved then made a counteroffer, and agreement followed."⁵⁷ Toward the end of the 1860s, supervisors set piece rates; later the shop office took charge of this but followed the supervisors' recommendations.⁵⁸ The few unskilled workers received, on average, two-thirds of the earnings of skilled workers.⁵⁹

Until the early 1870s, working hours in summer were 6 A.M.-noon and 1:30 P.M.-6 P.M., and in winter 7 A.M.-noon and 1:30 P.M.-7 P.M. Sometimes working hours were longer in summer than in winter.⁶⁰ Subtracting half an hour a day for breakfast and a fifteen-minute break, this leaves an effective weekly work time of 58.5 hours for the period before 1870. The supervisors ensured that working hours were observed; wages were docked for missed hours and a ten-pfennig fine imposed.⁶¹ From the beginning, S & H had rejected the pre-industrial custom under which work time was determined by daylight rather than by the clock. However, overtime was often demanded and worked. Later, even work regulations required working late if necessary.⁶² The telegraph manufacturing facility's distinct difference from traditional crafts shops was reflected in its clear limits on work and the strict separation of workplace and worker housing, as well as in the possibility of rapid layoffs of workers.⁶³

Around 1855, there were already six work halls, "but," as a supervisor stated, "they cannot yet be characterized specifically; there was also a mechanical shop – though it was divided up spatially – in which telegraph apparatus, relays, galvanoscopes, etc. were assembled throughout."⁶⁴ Each of the halls was headed by a supervisor. The initial structuring of the labor process into comprehensible units thus proceeded according to spatial characteristics external to the labor process. Neither the diversification of objects of production nor the division of labor had reached a level that would have made them useful as organizing features.⁶⁵ Even carpenters' shops, forges, and foundries were lacking, in contrast to contemporary factories in the metal-processing industry, at least before 1860. S & H subcontracted the production of semi-finished products such as screws, wires, pipes, and metal sheets. Thus they still made use of a form of decentralized production that had been quite popular before the Industrial Revolution. There was only a nickel plating shop, used for surface treatment of the finished apparatus.⁶⁶

This homogeneity did not change until the slack period at the start of the 1860s. The poor business climate at the time encouraged innovation. Werner Siemens, who had already made an attempt to introduce piecework, now reviewed the costs of manufacturing. He came to the conclusion that: "Up to now, the obstacle to inexpensive work was that we have no foundries, and carpentry work is also done elsewhere. Yet casting and carpentry work make up far more than a third of our business. After much hesitation, therefore, we have decided to build a carpentry shop and foundry. The costs of some 3,000 Rt. will be mainly recouped within a year, if we calculate foundry and carpentry receipts as only ten percent profit out of 30,000 to 40,000 talers. Then we could work really cheaply."⁶⁷ The incentives inducing businesspeople to use a decentralized form of labor might have been, among other things – as the hesitation mentioned by Werner Siemens suggests – the fear of too great a property investment and illiquidity. This overdue centralization – and with it, another step toward the factory – did not happen at S & H, as it had in other cases, because of the need for oversight, but because of profitability issues, which were only now becoming more evident and were already couched in qualifying prognoses.⁶⁸

In 1860, the diversification of the entire shop progressed in yet another regard. In that year, for the first time, a materials administrator was mentioned among the firm's employees, its "officials"; however, he did not just take care of the raw materials, but had other tasks, too.⁶⁹ The dictates of supervision required further subdivision; since the mid-1850s there had been a "regulation room," in which outgoing apparatuses were inspected ("adjusted"). With increasing division of labor, simple inspection gradually turned into parts assembly. Around the same time, an "experimentation room" came into being, the future laboratory.⁷⁰ Thus for the first time, certain preparatory labor processes began to be split off and centralized.

The organizational changes in the shop mentioned so far resulted from a dismantling of the original uniform work processes or the integration of previously subcontracted production segments. Between 1850 and 1860, however, a second, initially less important, process of differentiation began: the specialization of the various halls and work groups according to objects of production.⁷¹ The start of nonsector water gauge production, for reasons of security and profit, made it necessary to provide this "alien body" with its own hall and supervisor.⁷² The assumption of this new branch of production, and the organizational changes connected with it, created no difficulties, given the as-yet-unsettled shop conditions; neither did the advent of production of "alcohol gauges" in the early 1860s.⁷³

With increasing differentiation and expansion of the labor process, the problem of coordination was posed with heightened urgency. Super-

visors and shop managers were part of the solution. From the start, supervisors stood out from workers at S & H.⁷⁴ Despite increasing numbers of halls and fluctuating workforce figures, their number remained quite constant (four to five); thus the number of workers per supervisor numbered twenty-one in 1856, twenty-seven in 1860, thirty-one in 1863, thirty-eight in 1864, thirty-one in 1865, and thirty in 1866 (including unskilled laborers).⁷⁵ Because the number of halls increased (by the late 1850s, there were eight to ten), while the number of supervisors remained constant, it was soon necessary to install a so-called deputy supervisor, directly answerable to the supervisor, to function as intermediary between workers and supervisor.⁷⁶

All the supervisors (*Werkmeister*, also called *Werkführer*) seem to have emerged from the class of skilled workers. If we consider that supervisors were later installed as branch managers, that they could advance to “shop director” or be appointed manager of the technical office or to external technical correspondence, it follows that, in this early stage of industrialization, the position of skilled worker brought with it a chance to move up in the ranks of the new enterprises, a hierarchy that did not end at supervisor or draftsperson.⁷⁷ This was possible as long as empirical experience gained on the job was sufficient for these administrative and managerial positions and as long as these opportunities for advancement were still emerging and staffing problems remained pressing. Supervisors were first appointed on a trial basis and paid by the week. The tone of the final letter of appointment, often written by Werner Siemens himself or one of his top managers, reveals the significance of this position: “... we hereby appoint you definitively as supervisor and approve a salary of 350 talers starting on 1 July. We expect you to continue to conduct your office with zeal and energy, and thus give reason for further honors.”⁷⁸ The custom of closing the shop when a supervisor was buried and sending the workforce to the cemetery throws light on the supervisor’s special position.⁷⁹

Supervisors also differed from the workers in the type and amount of their pay. While the shop’s managing director earned 700 talers in 1856, two supervisors – who were also his deputies – received 400 talers each, one received 375 talers, and two others 360 talers each. In 1860, five of them earned an average of 475 talers; in 1866, the managing director received 700 talers, his assistant, soon to be his successor, received 600, and five supervisors earned an average of 420 talers each, while the average worker’s wage was roughly 300 talers.⁸⁰

In the predominantly manual work process, the supervisor seems to have gained authority over the workers primarily through mastery of the craft, through professional qualifications. The nature of the work demanded that the supervisor be able to demonstrate to the subordinates

what they were supposed to do. The supervisor was to show new workers the ropes – but generally did no manual labor. It might happen that the supervisor “designed,” along with Siemens or Halske.⁸¹ Some supervisors achieved positions of trust and worked closely with Werner Siemens – even on holidays and in Siemens’s own home.⁸² This early supervisor united supervisory, oversight, work performance, work preparation, and administrative functions in one person.⁸³ The supervisor, though having many tasks, was never occupied with business or accounting tasks.⁸⁴ With the introduction of the piecework system, the supervisor’s functional latitude and power were at first significantly increased; he distributed the work and helped to negotiate the piece rates. Thus the supervisor’s own preferences could be brought to bear to a greater extent than before. After 1865, however, “making pieces” formally became the “job of the shop office,” which began to undermine the supervisor’s position in this and other ways.⁸⁵

As early as 1855, the oldest supervisor, who liked to call himself “engineer,” took the position of a senior supervisor or shop manager. Weiß, the senior supervisor in 1856, earned twice as much as the lower-paid supervisors.⁸⁶ With around 100 workers and five supervisors, Halske, who himself had a small shop within the emerging factory and apparently did not want to give up his crafts activities for the sake of oversight and coordination, needed someone to oversee and coordinate the incipient division of labor and the increasing number of halls.⁸⁷ Weiß had clear authority to give orders to the supervisors.⁸⁸ His importance increased the more Halske withdrew from the shop (starting in 1863). Weiß made personal efforts, in times of economic depression, to obtain orders for his workers in the military shops in Spandau. The shop had such independence in these early years that it could communicate with the outside world directly, without the mediation of the proper office in the front building.

Like the position of supervisor, the position of shop manager combined quite heterogeneous functions. The manager oversaw the supervisors and thus also the workers. At the manager’s suggestion, selected workers received a so-called “inventory bonus,” that is, an annually distributed bonus dependent upon individual performance, firm profits, and management discretion.⁸⁹ He functioned as a court of appeal in piecework disputes and possessed limited organizational power in regard to division of labor among the different supervisors, to whom he distributed orders. He and his two deputies administered the workers’ personal files, the payroll, and the piecework book. The shop manager was responsible for honoring delivery dates.⁹⁰ His subordinates included a draftsman and a secretary, called the “chief shop accountant” after 1865.⁹¹ The increase in this person’s tasks had already led to the creation

of a "shop office" in the 1850s.⁹² The shop manager had probably always had a place where he had completed his (originally minor) written tasks, with the help of the draftsman and later the secretary. When the increase in written work made it necessary for him to call upon the assistance of his two deputies more and more frequently, the workplace used by him and his staff became the "shop office." It was located on the second floor of the shop building, thus remaining separate, even in terms of space, from the commercial and general administrative offices in the front building.⁹³

While it is frequently assumed that early industrial power relationships were characterized by particular harshness toward workers, who were not yet accustomed to the discipline of centralized production,⁹⁴ this was not the case during the early years of S & H. The relationship between skilled workers and supervisors, at least, seems to have been relatively harmonious and artisanal. The crafts-like working method ensured individual workers a relatively independent position. Nevertheless, it was one of the functions of the powerful supervisors to hire and, above all, to fire, without giving the worker any reason. Firing was a threat that hung over the workers constantly; after all, orders at first were highly unstable. However, two supervisors agreed that S & H had at its disposal a long-standing core of workers whose average age was quite high.⁹⁵ A personnel policy that aimed for continuity and the "loyalty" of the core workforce was in the interests of the enterprise during these years, primarily because of the discrepancy between the small supply of qualified workers and the heavy demands of this technically complex, as well as unprecedented, pioneer enterprise; this discrepancy created obstacles when orders were good, confronting Werner Siemens with his thorniest problem as a businessman. Workers were protected from extremely arbitrary behavior by the supervisors through factory regulations that they were required to sign when they were hired.⁹⁶ Factory behavior could not have been particularly gentle, as shop manager Weiß subscribed to the principle that "Anyone who fights or allows fighting will be fired."⁹⁷

Internal factory patterns of authority and cooperation changed somewhat, however, under the influence of expansion and more profit-oriented thinking, which gradually began to prevail over the strong crafts tradition in the shop. As shown, this increased attention to capitalist principles by company management was manifested in explicit reconsideration of production methods and organization; their traditional characteristics were no longer seen as the norm but instead were recognized as needing change in order to increase efficiency and profit. The result worked in favor of increased departmental diversification and simultaneous centralization of production processes. Initial efforts to

pay workers on a piecework basis were also an expression of this increasingly apparent capitalist thinking, speculating with the workers' desire for profit rather than subjecting them to direct authority or patriarchal welfare policies.

It appears that conflicts between emerging shop hierarchies and workers first began to take effect in this period. It is noteworthy that recorded disputes generally emerged in situations in which the intensified dictates of profitability were violated. Supervisors, especially if they enjoyed a particularly loyal relationship to Werner Siemens, acted harshly and personally against workers who drank on the job, spoiled materials, or caused losses in other ways. Most likely, they frequently used their new power of distributing piecework one-sidedly, in the interests of the owner. The conflicts between supervisors and workers in this period grew into improvised work stoppages at the department level.⁹⁸ The increasing appearance of the "spirit of capitalism" intensified control in the shop, which was now to be gradually purged, not without conflict, of remnants of the artisanal period.

Despite such changes, there is much evidence that, during the period discussed thus far, 1847 to 1867, the S & H shop could not yet be seen as a factory but still largely as a manufactory.⁹⁹ It differed from traditional crafts shops, as well as from decentralized putting-out systems, in its application of capital accounting, its size, the formally free and contractual character of the handiwork performed in it, the (increasing) centralization of its work processes, and the separation of the labor process from the home of the worker. However, the crafts basis of production, the complete absence of specialized machine tools, the late introduction of just one power-driven machine, the limited development of a piecework payment system, and the barely-begun separation of manual and nonmanual labor indicate that this enterprise was only just beginning to develop into a factory. Contemporaries themselves disagreed over what to call it.¹⁰⁰

Mechanization and Hierarchy

The boom period of the late 1860s and early 1870s, with which Germany concluded the first phase of its industrialization, sometimes called "Industrial Revolution," was a time of intensive growth and expansion for the Siemens company. It was this period that finally saw the as-yet-incomplete transformation of the manufactory into a factory, before the beginning of the depression in 1873 temporarily brought the process of expansion and restructuring at Siemens, as elsewhere, to a standstill. In May 1866, improvements in the growth of orders at S & H had been

indicated, coming somewhat ahead of the general cycle, but reaching their peak simultaneous to it in the years 1867-69 and 1871-73. The increase in sales and employees, new production techniques, and the tense situation on the labor market pushed it to transcend the organizational forms developed so far. Encouraged by natural attrition – shop manager Weiß retired in 1867, co-owner Halske in 1868, and W. Meyer, longtime “procurist and chief engineer,” died the same year – company management began to seek new organizational and employee-policy responses to the changed technological and commercial situation. These will be treated here only where they directly concern production techniques and shop relationships.

The number of company employees in Berlin, which had been stagnating since the early 1860s, grew from 166 in 1866 and 192 in 1867 to 628 in 1873 – that is, 227 percent from 1867 to 1873. From 1867 to 1873, the firm in Berlin saw its sales increase by 244 percent.¹⁰¹ Labor productivity increased accordingly. Prior to 1871, the good business resulted primarily from construction of the Indo-European telegraph line, on whose forty-seven hundred kilometers the firm worked for almost three years and whose maintenance it took on by contract. After 1871, the entire firm’s main profits were in the area of transatlantic cable, which was laid primarily by Siemens Brothers in London, in cooperation with the Berlin shop.¹⁰²

In addition to these international projects, Prussian armaments contracts for telegraphs and cables stimulated the business.¹⁰³ The Franco-Prussian War increased contracts to such an extent that the Berlin shop was no longer able to deliver to its London customers on time.¹⁰⁴ The “lofty mood” of 1866 and 1870-71 had a direct effect on the firm’s business, in the form of contracts for electromagnetic mine detonators, electric distance meters, electric ship steering, and, especially, military telegraphs.¹⁰⁵ In addition, the war demonstrated the weakness of the railroad’s non-uniform signaling system, thus accelerating the decision to adopt S & H’s security system throughout the German rail network.¹⁰⁶ The magnitude of the resulting commerce in block equipment and signals for railroads rivaled that of the telegraph after 1871.¹⁰⁷

It was not only the economic boom, further stimulated by the war and business surrounding German unification, that brought new life to the telegraph manufacturing facility. At the end of 1866, Werner Siemens discovered the electric dynamo principle.¹⁰⁸ Although he was aware of the overwhelming importance of this invention which would open up a large new branch of electrical industry, the firm’s focus on the aforementioned areas prevented immediate development of the discovery and its broader commercial exploitation.¹⁰⁹ By 1873, the firm had sold only some 260 small dynamos.¹¹⁰

Besides telegraphs and railroad block equipment, which made up the greater part of the business, the stable, risk-free, flourishing production of water gauges and the expanding manufacture of alcohol gauges carried the greatest weight. The commercial boom necessitated an expansion of space. After the neighboring property had been incorporated by the expanding shop, alcohol gauge production was transferred to a site in Charlottenburg in 1872.¹¹¹ Nevertheless, lack of space remained a typical characteristic of the Siemens shops in Berlin.

The rapid expansion of production confronted the firm with the difficulty of finding sufficient numbers of qualified workers. The firm's expansion reached its limits with particular clarity in this workforce shortage.¹¹² Although only about 20 percent of Siemens employees were drafted into military service in 1870, the war worsened this shortage,¹¹³ which failed to improve in subsequent years. "We now have many empty halls," wrote Siemens in 1873, after the transfer of one branch of production to Charlottenburg had created space, "but we cannot get workers to fill them."¹¹⁴

The increase in wages was merely a result of this labor market situation. After 1871, a worker earning hourly wages made almost twice as much as he would have five years earlier. Trained workers, including pieceworkers, received somewhat more than ten talers per week on average.¹¹⁵ At the same time, the young, still fragmented workers' movement, bolstered by the booming economy, gained vitality and an influence over machine builders – including the staff of the telegraph manufacturing facility – who had hitherto leaned more toward the liberals. In April 1871, Berlin shoemakers, bricklayers, and carpenters went on strike for higher wages and shorter working hours; and in July 1871, at the initiative of members of the General German Workers' Association (*Allgemeiner Deutscher Arbeiterverein*), a "mechanical engineers' strike fund" was created.¹¹⁶ An unsuccessful strike of the *Norddeutsche Wagenbau-Fabrik* (August 1871), the creation of the Berlin Workers' Union (*Berliner Arbeiterbund*), influenced by supporters of Lassalle, and clashes between homeless people and workers and the police in July 1872 marked a process of worsening class struggle in Berlin, which spread to the metal processing industry with the unsuccessful strike in the (formerly) *Pflugsche Fabrik für Maschinenbedarf*.¹¹⁷ This strike movement, which ebbed for a time with the crisis of 1873, also influenced labor policies in businesses not affected by the strikes. Wage increases and reduction in working hours to fifty-four hours per week were, at least in part, concessions by the S & H company to smoldering strike threats and socialist agitation.

Werner Siemens was prepared to respond to strikes with lockouts, and for this purpose he organized one of the first employers' associations

in Berlin, the Association of Representatives of the Berlin Metal Industry, as early as 1872. After he himself had succeeded in 1870 in averting a threatened strike at the enterprise level by visiting the workers' assembly, he now drew up a proclamation, signed by all employers, in which he appealed to the metal workers' desire for peace.¹¹⁸ The employers agreed not to employ any worker without an official leaving certificate from his previous employer, or to reemploy any striking worker less than four weeks after the end of a strike.¹¹⁹ Siemens did not need to carry out his decision to close the factory rather than "be forced through brutally violent maneuvers to make concessions that are unreasonable and not even in the interests of the workers."¹²⁰ The strike movement collapsed before it could spread to S & H.¹²¹

Besides certain new instruments of employee policy (above all, the firm's 1872 pension fund, which bound the employees to the firm¹²²), the main response of firm management to the problem of worker scarcity and worker demands was the consistent introduction of machine tools. "To be able to make good things even with bad workers,"¹²³ to be able to produce more with relatively fewer workers, and to free himself from dependence on a large number of qualified workers, Siemens began to transform the manufactory workshop into a true factory by way of mechanization. Thus under booming economic conditions, the incipient labor struggle apparently acted as a stimulus to progress in mass-production. From 1868 to 1873, the value of the machine tools and tools being used grew sevenfold, and investments for power-driven machines almost sixfold, while staff and sales grew only three- to fourfold. This rapid mechanization ended in 1873. Figures on the machine accounts stagnated thereafter until 1880.¹²⁴

Within the Berlin business, Werner Siemens assumed the initiative and leadership in this modernization process. Halske's retirement made it easier for him to follow his brother's long-standing advice and introduce "mass production" – an expression he himself used – despite the resistance of the shop. At the instigation of an acquaintance, Berlin manufacturer Ludwig Loewe, who had been producing sewing machines since 1868 and weapons since 1870 in serial production on the American model, and through the mediation of an American engineer, the firm bought two heavy and six light milling machines, four multispindle drills, and several planing machines in the United States in 1871 and 1872.¹²⁵ During the overall economic expansion of 1872, delivery of machine tools in Germany took five to six months. Werner Siemens asked his brothers to use their connections to obtain additional milling machines and lathes in a shorter time in France or England. "Everything now depends on rapidly procuring such machines, as workers are almost impossible to find ... With some agitation, we can get nearly as much

work as we want, but we must refuse or hold back, because we lack workers and machines."¹²⁶ The machines first stood in a room in the new factory building at Markgrafenstraße 92, the "American hall." A worker who had been with S & H since 1863 was sent to the Loewe sewing machine factory for a few months to study production by machine, and then took over as supervisor of the new department in 1872.¹²⁷ In contrast to their boss, most of the employees, especially the supervisors, exhibited a guarded antipathy toward this innovation, in part because of doubt that the apparently increased manufacturing possibilities would be justified by corresponding sales.¹²⁸

A worker could operate two to three machines. "Because ordinary workers must generally be trained for the machines – when possible, naturally, by older ones – and these can then all be employed in piecework, the so-called American hall soon created a strong point of socialist attack. The great acceleration of work did not suit these people. It took a long time before the old craftsmen in the shop accepted it."¹²⁹ This description in retrospect by a supervisor, which could be supplemented by mention of the increased supervision and pressure in the shop in the process of mechanization,¹³⁰ indicates the difficulty of adaptation created by a process in the course of which the piecework system would ultimately prevail and the old industrial craftspeople would be forced to take on functions that a younger, non-crafts-trained worker with only brief training could carry out as well or better.¹³¹

Torpedo equipment and a certain type of "standard" telegraph were the first products to be manufactured in serial production. After a few months, Siemens wrote, "We have therefore eagerly striven for a year to do everything with specialized machines like the Americans ... This has proved its worth brilliantly ... Now we are all convinced that our future salvation lies in the application of American labor methods, and that we should change our entire management method in accordance with this. Only mass production can be our task in the future; in the future, we will be able to satisfy every need with it and outdo any competition!"¹³²

Indeed, the changes in the factory's management and organization caused by the introduction of machines went far beyond the shop floor. First, it was necessary to "place a certain amount of pressure on our customers and dictate our designs to them. We can do this by delivering our 'manufactured' designs very cheaply, well, and quickly, while others do so expensively, slowly or not at all ... Arbitrary changes in our established designs must become as ridiculous as if someone would want to order an altered sewing machine. If he wants to have it, he must build a factory for it or have it made by hand at ten times the price."¹³³ It proved to be less difficult to accomplish a degree of standardization – although not to the same extent as with real "mass production" – and to educate

the market accordingly than Werner Siemens had originally expected. This was especially true since Siemens customers were largely government offices and Siemens was dealing neither with individualized equipment, as in the later high-voltage business, nor with consumer goods possessing individual distinctions that had to satisfy varying tastes.¹³⁴

The mechanization and changed market orientation that was asserting itself in the process of transition from manufactory to factory meant not only increasing dependence and loss of status for individual industrial craftspeople but also a loss of function for the shop as a whole. "The introduction of the machine was naturally not the final word; the apparatus until now produced mainly by hand, which was now to be produced by machine, had to be reconstructed for mass production; as many individual parts as possible had to be cut and drilled with machine power."¹³⁵ This remark by a supervisor involved in the process indicates that, with the installation of machines, relationships between work preparation and manufacture, design and production had to change. Indeed, Werner Siemens had already written in November 1869, nearly half a year before the first machine was installed, "We are now putting a lot of effort into good design We are directing our efforts toward introducing standard design, which can then be produced cheaply and thus ease the competition." "Mechanicus design," he wrote, was finally a thing of the past.¹³⁶ As an anticipated consequence of machine production, the first design office was set up at S & H in 1867-68 and headed by Friedrich von Hefner-Alteneck.

The date of Hefner-Alteneck's hiring and the way it was done marked a qualitative leap in the development of the telegraph manufacturing facility.¹³⁷ Hefner-Alteneck applied to be a draftsperson at S & H in 1867, impressed by the new electrical engineering and the products of this company, which he had seen that year at the Paris World's Fair. He was rejected in June 1867. The primarily artisanal shop was still satisfied with its single draftsperson of many years' standing.¹³⁸ Hefner-Alteneck then came on board as a worker at a weekly wage of five to six talers. Only four months later, immediately before Halske's official, long arranged retirement, the firm began to set up a "design room." Through the mediation of his Zurich professor, Hefner-Alteneck was taken out of the shop and into the new office. Two months later, he had under him a promoted mechanic, paid by the week with a design bonus, followed in July 1869 by a second designer who had not risen from the shop floor but had been engaged from outside. By the end of the year, four people worked in the far-too-crowded design room, from which Hefner-Alteneck had already removed himself;¹³⁹ he worked on a wicker chair in the anteroom.¹⁴⁰ In 1870, the four designers, in a tiny room with two windows located on the second floor of the front building, were already

working on drawing boards with compasses and multicolored ink, seated at their desks in business suits, if not dark frock coats. A day laborer acted as messenger in the corridors between the design room and the carpentry model workshop. Hefner-Alteneck, sitting in the anteroom as the immediate superior, chief engineer Frischen as head of technical administration, and frequently Werner Siemens as well, brought sketches ("schemata") that had to be completed carefully but rapidly and traced ("durchgepufft") partly on paper and partly on canvas.¹⁴¹ While Hefner-Alteneck, the engineer and head designer, did independent, constructive work and soon contributed groundbreaking discoveries to the firm's development, the other designers from the beginning were limited mainly to the largely mechanical work of execution.¹⁴²

At more or less the same time, a technical sales office and the first laboratory were set up.¹⁴³ Both these areas of operation included functions that previously had been carried out by the shop manager and various supervisors. With the emergence of the design office, the period of supervisor "design" came to an end. The increasing significance of science in engineering and production was manifested in the design office and the laboratory. The sales office, which negotiated contracts for the shop, institutionalized production's dependence on the market, with which the shop no longer maintained direct contact. The existence of all three departments meant increasing outside control of the shop as a whole. Manual and nonmanual labor had been separated.¹⁴⁴

Notes

1. See the copy of the contract in the Werner von Siemens Institute, Munich, Siemens-Archiv Akte (hereafter SAA), 21/Li 53.
2. See G. Siemens, *Geschichte des Hauses Siemens*, 3 vols. (Munich, 1947-1952), vol. 1 p. 22f. [2nd ed., *Der Weg der Elektrotechnik. Geschichte des Hauses Siemens*, 2 vols. (Freiburg-Munich, 1961); engl. ed.: *History of the House of Siemens*, 2 vols. (Freiburg-Munich, 1957)]. A recent survey on the history of Siemens and the electrical industry until the First World War (with a good bibliography): W. Feldenkirchen, *Siemens 1918-1945* (Munich-Zurich, 1995), pp. 19-87; also cf. idem, *Werner von Siemens. Erfinder und internationaler Unternehmer* (Munich, 1992).
3. See G. Siemens, *Geschichte*, vol. 1, p. 29; P. Dunsheath, *A History of Electrical Engineering* (London, 1962).
4. On paydays in this period, Halske would sometimes borrow hundreds of talers. See G. Siemens, *Geschichte*, vol. 1, p. 34. On sales and profit, E. Waller et al., "Studien zur Finanzgeschichte des Hauses Siemens" (unpublished manuscript in SAA 38/857), vol. 1, p. 9.

5. See W. Siemens, *Lebenserinnerungen*, 17th ed. (Munich, 1966 [1892]), p. 117f. (engl. ed.: *Inventor and Entrepreneur. Recollections of Werner von Siemens*, 2nd ed. (London, 1966); W. Siemens, *Kurze Darstellung der an den preußischen Telegraphenlinien mit unterirdischen Leitungen gemachten Erfahrungen* (Berlin, 1851).
6. See the description of the risky undertakings in Russia in R. Ehrenberg, *Die Unternehmungen der Brüder Siemens*, vol. 1 (Berlin, 1906), p. 65ff; G. Siemens, *Geschichte*, vol. 1, p. 35ff.
7. On the question of the influence of the Crimean War on the history of S & H, see Werner Siemens to his brother Carl, 9 February 1854, in *Werner Siemens: Ein kurzgefaßtes Lebensbild nebst einer Auswahl seiner Briefe*, ed. C. Matschoß, 2 half-vols. (Berlin, 1916) (hereafter Matschoß, *Briefe*), p. 101; W. Siemens, *Lebenserinnerungen*, p. 144; G. Siemens, *Geschichte*, vol. 1, p. 37f.
8. These comparisons are based on estimates, as the accounts of the Saint Petersburg business went through Berlin until 1855 and were not listed entirely separately.
9. An exact investigation of the development of the English company, outlined only roughly here, is found in S. v. Weiher, "Die Entwicklung der englischen Siemenswerke und des Siemens-Überseegeschäftes in der zweiten Hälfte des 19. Jahrhunderts" (phil. diss., Freiburg/Br., 1959). See also Ehrenberg, *Die Unternehmungen*, p. 119ff; G. Siemens, *Geschichte*, vol. 1, p. 49ff; Dunsheath, *A History*, p. 209ff. (on the problem of the submarine cables).
10. The profits of the entire firm amounted to 58,500 talers in 1856; 97,800 in 1857, 101,000 in 1858; 122,000 in 1859, 252,000 in 1860. See Waller, "Studien," vol. 1, p. 37.
11. For details cf. J. Kocka, *Unternehmensverwaltung und Angestelltenschaft am Beispiel Siemens 1847-1914: Zum Verhältnis von Kapitalismus und Bürokratie in der deutschen Industrialisierung* (Stuttgart, 1969), pp. 61, 566.
12. See Werner Siemens to his brother William on 3 January 1861, in Matschoß, *Briefe*, p. 171f.
13. See G. Siemens, *Geschichte*, vol. 1, p. 44f.
14. See Ehrenberg, *Die Unternehmungen*, p. 282.
15. See *ibid.*, p. 98.
16. See Werner Siemens to his brother William on 3 January 1861, in Matschoß, *Briefe*, p. 172. The low degree of mechanization made it possible to start an enterprise with little start-up capital, as S & H itself had proven.
17. According to the recollections of supervisor Jacobi (SAA 12/Lh 582, 2, p. 9). Cf. note 21 below.
18. On the developmental activities at S & H in this period, see G. Siemens, *Geschichte*, vol. 1, pp. 44-49.
19. This continuity up to 1867 is reflected in employment figures. In Berlin, Siemens employed:

| | | | | |
|----------|-----------|-----------|-----------|-----------|
| 1848: 18 | 1853: 49 | 1858: 46 | 1863: 168 | 1868: 211 |
| 1849: 28 | 1854: 90 | 1859: 154 | 1864: 163 | 1869: 271 |
| 1850: 49 | 1855: 122 | 1860: 150 | 1865: 135 | 1870: 380 |
| 1851: 50 | 1856: 119 | 1861: 141 | 1866: 166 | 1871: 446 |
| 1852: 90 | 1857: 127 | 1862: 135 | 1867: 192 | 1872: 581 |
| | | | | 1873: 628 |

After this, employment figures sank slightly, reaching a low of 469 in 1876, and then rose rapidly once more (1880: 631; 1885: 1,142; 1890: 2,737). Yearly averages from SAA 29/Le 932, 1.

20. At Schöneberger Str. 19 (after 1848, no. 33, near Anhalter Bahnhof).
21. See the recollections of supervisors Jacobi (p. 8) and Schwenicke (p. 8), in SAA 12/Lh 582, 2 and 12/Lh 583. These "recollections" involve records of discussions

- around 1910 between the head of the Siemens archive and a series of members of the old workforce.
22. According to SAA 8/Lh 633.
 23. According to G. Siemens, *Geschichte*, vol. 1, p. 32.
 24. See G. Siemens, *Carl Friedrich von Siemens: Ein großer Unternehmer* (Freiburg-Munich, 1960), p. 11f.
 25. In 1859, the Berlin factory's books still listed the item "officials' apartments" (SAA 24/Ld 580).
 26. According to Schwennicke's recollections (SAA 12/Lh 583), appendix.
 27. See Schwennicke's recollections, p. 8.
 28. See G. Siemens, *Geschichte*, vol. 1, p. 94.
 29. See A. Schröter and W. Becker, *Die deutsche Maschinenbauindustrie in der industriellen Revolution* (Berlin, 1962), p. 161.
 30. According to Schwennicke's recollections, appendix. In 1846, eighty of 131 Prussian machine factories already had steam machines. See A. Schröter and W. Becker, *Die deutsche Maschinenbauindustrie*, p. 93.
 31. The first steam-driven machine appeared in the investment accounts in 1863 at a sum of 4,800 talers.
 32. A supervisor reported about this period, "Many instruments were operated by one hand ... A rational work method was not really possible because our products had to be completed only in small quantities in constantly changing forms." Recollections of Schwennicke, appendix.
 33. See William Siemens to his brother Werner on 24 March 1864 in SAA Briefsammlung (hereafter SAA BB).
 34. See the figures on falling apparatus prices in Ehrenberg, *Die Unternehmungen*, p. 478.
 35. See recollections of Jacobi, p. 11.
 36. See Ernst Wilhelm Schwennicke, "Ahnenfolge der Familie Schwennicke aus Gräfenstuhl 1650-1950," written 11 February 1950 (ms.), in SAA 12/Lh 583.
 37. See Werner Siemens to his brother Carl on 22 November 1854: "The mechanics take a long time to learn to deal with apparatus" (SAA BB).
 38. For example, supervisor Schwennicke, who came to S & H in 1859, after completing a four-year apprenticeship under "Mechanicus" H. Baumann in Berlin. The supervisor had skipped one of the normal five years of apprenticeship because Schwennicke had paid him 100 talers annually for apprenticeship and room and board annually. Schwennicke's master tried to keep him from entering the factory by arguing that he would only "become worse in his field."
 39. Recollections of Jacobi, pp. 1, 9.
 40. However, there were 367 master mechanics (with 503 assistants and apprentices), as opposed to 17,933 fitters (with 18,400 assistants) and 2,700 watchmakers (with 1,309 assistants and apprentices). See F.W. v. Reden, *Erwerbs- und Verkehrs-Statistik des Königstaats Preußen in vergl. Darstellg., Abt. I-III* (Darmstadt, 1853/54), p. 262f. It was understood that among the mechanics used most frequently by S & H were craftspeople who produced mathematical, optical, physical and surgical instruments – that is, precision instrument makers. They worked primarily for scientific institutes but were not scientifically trained. In 1846, there was only one large company working in this area in Prussia: Eduard Dunker's "Optische Industrieanstalt" in Rathenow (in the Potsdam administrative district), with sixty-five workers in 1844 and 100 in 1849. In addition, there were crafts shops – almost exclusively in urban areas – with little more than one (or in Berlin not quite two) assistants per master. See R. Ehrenberg, "Das Wesen der neuzeitlichen Unternehmung," *Thünen-Archiv, Organ für exakte Wirtschaftsforschung* 1 (1906): 38ff. On 22 November 1854, Werner Siemens had already complained in a letter to his brother Carl, "We lack mechanics ... It is difficult to find reliable people" (SAA BB). Supervisor Schwen-

- nicke also reported an often "very small supply of suitable workers" (recollections, appendix).
41. Recollections of Jacobi, p. 1.
 42. See Carl Siemens to his brother Werner on 7 January 1870 (SAA BB).
 43. Werner Siemens to his brother William on 31 May 1847 (SAA BB). About this period, supervisor Schwennicke reported, "We at first developed far too much cleanliness in production: the styluses were polished inside and out, the gears were lacquered and then galvanized in gold ... Later it was no longer possible to accomplish this level of precision."
 44. Carl Siemens to his brother Werner on 7 January 1870 (SAA BB).
 45. Werner Siemens to his brother Carl on 27 March 1858 (SAA BB).
 46. See recollections of Jacobi, p. 1. The dominance of crafts-trained, highly qualified workers is typical of the machine building and precision shops of the period, which – in contrast to shops in textiles and heavy industry – often had not entirely abandoned their artisanal character by the turn of the century. See W. Fischer, "Soziale Unterschichten im Zeitalter der Frühindustrialisierung," *International Review of Social History* 8 (1963): 428.
 47. According to the books of the Berlin shop, 1854-1867 (SAA 24/Ld 580).
 48. See recollections of Jacobi, p. 1.
 49. See recollections of Schwennicke, p. 4.
 50. See W. Fischer, "Innerbetrieblicher und sozialer Status der frühem Fabrikarbeiterschaft," in *Die wirtschaftliche Situation in Deutschland und Österreich um die Wende vom 18. zum 19. Jahrhundert*, ed. F. Lütge (Stuttgart, 1964), p. 203ff.; W. Fischer, *Der Staat und die Anfänge der Industrialisierung in Baden 1800-1850*. (Berlin, 1961), p. 367 ff.; O. Reuter, *Die Manufaktur im fränkischen Raum* (Stuttgart, 1961), p. 98f.
 51. See the payroll for 11-15 April 1853 in SAA 14/Lh 661. Prussian law determined in 1821: 1 taler = 30 silvergroshen = 360 pfennings. According to Imperial Law of 1871, 1 taler corresponded to 3 marks (1 mark = 100 pfennings).
 52. According to supervisor Jacobi (recollections, p. 3), supervisor Schwennicke (recollections, pp. 1, 6). Waller, "Studien," vol. 1, p. 10, and vol. 2, p. 32, finds slightly lower figures for 1848. The annual average earnings calculated by Ehrenberg (*Die Unternehmungen*, p. 468) point to somewhat higher weekly wages. However, this most likely includes Christmas and other bonuses, overtime and Sunday pay, from which only the permanent core of workers benefited. For 1855 to 1867, Ehrenberg cites annual average earnings of 300 to 323 talers, which fell slightly toward the end of this period. According to their own calculations (SAA 24/Ld580), trained workers earned, on an annual average and including bonuses, overtime, etc., 307 talers in 1859, 269 talers in 1860, 291 talers in 1861, 269 talers in 1862, 289 talers in 1863, and 313 talers in 1876. In any case, the wages paid at Siemens were far above the overall German average for the metal working industry (see figures in W.G. Hoffmann, *Das Wachstum der deutschen Wirtschaft seit der Mitte des 19. Jahrhunderts* [Berlin, 1965], p. 468ff., in which one must keep in mind a taler-mark ratio of roughly 1:3), as well as slightly higher than the Berlin average. According to statistics for early 1864 from the Berlin Handwerkerverein (artisans' association), mechanics earned four to five talers a week; fitters and smiths, four talers; and machine builders doing piecework, twelve to thirteen talers. See E. Bernstein, *Die Geschichte der Berliner Arbeiterbewegung*, vol. 1 (Berlin, 1907), p. 125f.
 53. See SAA 13/Lk781.
 54. See Werner Siemens to his brother Carl, 27 March 1858 (SAA BB). On 6 January 1859, Werner confirmed to William that he was trying out piecework in Berlin (SAA BB).
 55. Supervisor Jacobi (recollections, p. 2) stated that piecework, which encountered strong resistance among older workers, was not introduced to any significant extent until 1872. See also G. Siemens, *Geschichte*, vol. 1, p. 98.

56. See recollections of Schwennicke, vol. 1, p. 6, and letter from C. Müller to S & H on 1 October 1865 (SAA 13/Lk 781).
57. Recollections of Schwennicke, p. 5f.; and, confirming this, recollections of supervisor März (SAA 12/Lh 583, 3).
58. See recollections of Schwennicke, p. 5f.; G. Siemens, *Geschichte*, vol. 1, p. 98.
59. See Ehrenberg, *Die Unternehmungen*, p. 469.
60. See recollections of Schwennicke, p. 6, supplemented by Hermann Meyer; recollections of März; for a slightly different version, probably referring to a different period, recollections of Jacobi, p. 5.
61. See recollections of Jacobi, p. 7.
62. Work rarely went later than 9 P.M., though sometimes it continued on Saturdays and Sundays. See recollections of Schwennicke, p. 6.
63. But for examples of workers who still lodged at their worksites in 1827 and 1837, see W. Fischer, *Der Staat*, p. 349; Schröter and Becker, *Die deutsche Maschinenbauindustrie*, p. 80. Section 139 of the General Trade Regulations of 17 January 1845 provided for a mutual termination notification period of fourteen days, "where nothing else is agreed upon." The workshop rules of the S & H shop (1875) made possible termination without prior notification.
64. See recollections of Jacobi, p. 8f.
65. Schwennicke (recollections, p. 9) confirmed that "The first actual division of labor was established under Scholz [a managing director in the late 1860s]. Before, the workers obtained all sorts of practical little aids to their own advantage, but one could not yet speak of division of labor."
66. See recollections of Schwennicke, p. 11.
67. Werner Siemens to his brother Carl on 30 March 1860, in Matschoß, *Briefe*, p. 161f.
68. For examples of centralization for the sake of supervision, see H. Krüger, *Zur Geschichte der Manufakturen und Manufakturarbeiter in Preußen* (Berlin, 1958), p. 204ff.; S. Pollard, *The Genesis of Modern Management. A Study of the Industrial Revolution in Great Britain* (London, 1965), p. 34f.
69. See the factory books of the Berlin factory, 1854-1867 (SAA 24/Ld580).
70. See recollections of Jacobi, p. 9; recollections of Schwennicke, p. 10f.
71. On the systemic difference between these two processes of specialization, see M. Weber, *Wirtschaft und Gesellschaft*, ed. J. Winckelmann, 2 half-volumes (Cologne-Berlin, 1964), p. 86.
72. See recollections of Schwennicke, p. 9.
73. See G. Siemens, *Geschichte*, vol. 1, p. 101. See also the handwritten letter from Werner Siemens to "Herr Shop Foreman Schwannecke here. Berlin, 14 Dec. 1866" (SAA 68/Li180).
74. The position of earlier supervisors was quite different from shop to shop and case to case. See Kocka, *Unternehmensverwaltung*, p. 72f.
75. Calculated according to SAA 24/Ld580 and 13/Lk 781.
76. The fact that the firm did not instead increase the number of supervisors probably had to do with their privileged "official" [*Beamten*] status, which would run counter to management's interests if it became too common.
77. Supervisor Wolff became head of a branch in Vienna on 10 April 1858, but it lasted only a few years (SAA 13/Lk 781). The first three managing directors had been supervisors: Weiß (until 1866), Scholz (until 1878), and Jacobi (until 1895). Ed. Fromholz became head of the technical office; he had been supervisor of the regulation room (recollections of Schwennicke, p. 9).
78. Letter from S & H to mechanic Reinhard on 30 June 1858 (SAA 13/Lk 781).
79. Still the case on 26 November 1868 (see SAA 13/Lk 781).
80. According to SAA 24/Ld 580. These figures probably included bonuses and Christmas presents.

81. See recollections of Jacobi, p. 1.
82. According to supervisor Schwennicke.
83. The interim supervisor or contract system apparently was never used at S & H. See W. Fischer, "Innerbetrieblicher und sozialer Status," p. 202, esp. note 22; Pollard, *The Genesis*, p. 38 ff.
84. F. Croner, *Die Angestellten in der modernen Gesellschaft* (Vienna, 1954), p. 64 ff., discusses such combinations of responsibilities.
85. Recollections of Schwennicke, p. 5.
86. Based on wages on 1 January 1856 (SAA 13/Lk 781).
87. See recollections of Schwennicke, p. 9.
88. On 13 February 1860, S & H wrote to Wolff, the newly installed foundry supervisor: "The supervisors head the individual departments of our business and are answerable to the shop manager, H. Weiß, who would also be their immediate superior and all of whose orders they were to obey punctually" (SAA 13/Lk 781).
89. See recollections of Schwennicke, p. 6.
90. See the company regulations of 1872 (SAA 33/Ld 603, 1).
91. According to SAA 24/Ld 580.
92. It existed in 1860, at the latest. See SAA 24/Ld 580 and recollections of supervisors Schwennicke and Jacobi.
93. On the structure and staff of the emerging office departments, see J. Kocka, "Industrielle Angestelltenschaft in frühindustrieller Zeit: Status, Funktion, Begriff," in *Untersuchungen zur Geschichte der frühen Industrialisierung vornehmlich im Wirtschaftsraum Berlin/Brandenburg*, ed. O. Büsch (Berlin, 1971), pp. 330-67.
94. See K. Marx, *Das Kapital*, 3 vols. (Berlin 1962-1964), vol. 1, p. 289f. See also O. Schwarz, "Die Betriebsformen der modernen Großindustrie," *Zeitschrift für die gesamte Staatswissenschaft* 25 (1896): 541; W. Sombart, "Die Arbeiterverhältnisse im Zeitalter des Frühkapitalismus," *Archiv für Sozialwissenschaft und Sozialpolitik* 44 (1917): 26f.; Pollard, *The Genesis*, pp. 255, 269. Examples of the harshest forms of authority in the factory are in Krüger, *Zur Geschichte*, p. 220f.; H. Mitgau, "Die Gewehrfabrik zu Herzberg (Harz) (1739-1876) und die Hof-Rüstmeisterfolge der Tanner," *Tradition* 6 (1961): 274; Reuter, *Die Manufaktur*, p. 85f.; W. Fischer, "Die Anfänge der Fabrik von St. Blasien 1809-1848," *Tradition* 7 (1962): 65.
95. See recollections of Schwennicke, p. 4f., and recollections of Jacobi, p. 6. On the age of the workers, see also Ehrenberg, *Die Unternehmungen*, p. 468.
96. See recollections of Schwennicke, p. 5. The existence of these oldest factory regulations (1855) could not be proven.
97. Ibid.
98. Supervisor Schwennicke related the story of a "mutiny" in 1868. When he forbade "immoderate consumption of beer" to his "people" during working hours, although a new worker wanted to celebrate in the customary way, they abruptly went on strike. "They took the incident as an excuse to complain in general, so that the next day the entire workforce was assembled in the main hall to bring about a clarification of the situation" (recollections of Schwennicke, p. 4).
99. Cf. the definitions at the beginning of chapter 1. Combinations of (centralized) manufactory and (decentralized) putting-out systems were frequent, especially in textiles. Sometimes they are referred to as "decentralized manufactories." Here, this term is not used.
100. Sources generally used the expressions "business," "firm," and "workshop." However, as early as 1849 Werner Siemens spoke of the (planned) facility as a "factory" (Werner Siemens to his brother William, in Matschoß, *Briefe*, p. 68).
101. For employee figures, see note 19 above. The figures for 1873 include S & H as well as the production of alcohol gauges, which since 1872 had been accomplished by a legally independent firm, "Gebrüder Siemens." The sales figures for S & H Berlin

- in 1867 came to 676,580 marks; in 1873, the figure was 2,331,950 marks, according to Waller, "Studien," vol. 2, p. 55f.
102. See G. Siemens, *Geschichte*, vol. 1, pp. 73-85, 104-110.
 103. See Werner Siemens to his brothers Carl and William on 23 May and 11 June 1866, in Matschoß, *Briefe*, p. 253; to his brother William on 2 July 1866, in *ibid.*, 255.
 104. See Werner Siemens to his brother Carl on 18 July and 16 August 1870, *ibid.*, 325, 329.
 105. See W. Siemens, *Lebenserinnerungen*, p. 269.
 106. See G. Siemens, *Geschichte*, vol. 1, p. 91ff.
 107. See Werner Siemens to his brother Carl on 2 February, 25 February 1871, and 29 April 1872, in Matschoß, *Briefe*, pp. 332, 333, 361f.
 108. See W. Siemens, *Lebenserinnerungen*, p. 269f.; Dunsheath, *A History*, p. 99ff.; G. Siemens, *Geschichte*, vol. 1, p. 111ff.
 109. See Werner Siemens to his brother William on 17 December 1867 (SAA BB).
 110. See Waller, "Studien," vol. 2, p. 4.
 111. See Werner Siemens to his brother Carl on 7 September 1870 and 29 April 1872, in Matschoß, *Briefe*, pp. 330, 361.
 112. See Werner Siemens to his brother Carl on 12 May 1866, *ibid.*, p. 252f.
 113. See Ehrenberg, *Die Unternehmungen*, p. 468; Werner Siemens to his brother Carl on 2 February 1871, in Matschoß, *Briefe*, p. 332.
 114. See Werner Siemens to his brother Carl on 13 March 1872, in Matschoß, *Briefe*, p. 354. The shortage of workers was widespread. See H. Mottek, "Die Gründerkrise: Produktionsbewegungen, Wirkungen, theoretische Problematik," *Jahrbuch für Wirtschaftsgeschichte* T.I. (1966): 59.
 115. For details on workers' wages after 1867, see Kocka, *Unternehmensverwaltung*, p. 210ff.
 116. See Bernstein, *Die Geschichte*, p. 231ff.
 117. See *ibid.*, 235ff., 255ff., 257ff. "The workers' battle cry is 'raise all wages and piece-work rates by twenty percent.' For the joint-stock company for railroad fittings (formerly Pflug, now under Unruh), this 20 percent would supposedly eat up the entire dividend of 10.5 percent." (Werner Siemens to his brother Carl on 30 August 1872, SAA BB).
 118. Reprinted in K. Burhenne, *Werner Siemens als Sozialpolitiker* (Munich, 1932), p. 29ff.
 119. See Werner Siemens to his brother Carl on 30 August 1872 (SAA BB; parts also found in *Aus einem reichen Leben: Werner Siemens in Briefen*, ed. F. Heintzenberg [Stuttgart, 1953], p. 243f.).
 120. Werner Siemens to the director of the English branch, Loeffler, on 13 January 1872 (according to Burhenne, *Werner Siemens*, p. 26f.).
 121. See Bernstein, *Die Geschichte*, p. 255.
 122. On this, see Kocka, *Unternehmensverwaltung*, p. 127ff.
 123. Werner Siemens to his brother Carl on 13 March 1872, in Matschoß, *Briefe*, p. 354.
 124. On the development of the machine accounts at S & H Berlin from 1861-1880, see Kocka, *Unternehmensverwaltung*, p. 124f., note 35.
 125. See L. Loewe, *Actiengesellschaft Berlin 1869-1929* (Berlin, 1930), pp. 9ff., 19; Werner Siemens to Direktor Petzold on 3 May 1871, in Matschoß, *Briefe*, p. 335; Waller, "Studien" vol. 2, p. 31.
 126. Werner Siemens to his brother Carl on 29 April and 2 May 1872, in Matschoß, *Briefe*, p. 363.
 127. See recollections of März.
 128. Recollections of Jacobi, p. 2.
 129. *Ibid.* The relationship, clearly illustrated here in a specific case, between technological progress, loss of status of industrial craftsmen, and socialist protest deserves further examination.
 130. See Kocka, *Unternehmensverwaltung*, p. 212ff.

131. This made possible additional measures to ease the shortage of workers: hiring women, first as lacquerers, then as winders and spinners. Between 1871 and 1887, their number remained relatively constant: in 1871, 17 of approx. 410; in 1872, 18 of approx. 540; in 1872, 11 of approx. 515. See the corresponding list (in retrospect, by the archive) in SAA 68/Li 180.
132. Werner Siemens to his brother Carl on 13 March 1872, in Matschoß, *Briefe*, p. 354.
133. Werner Siemens to his brother Carl on 13 March 1872, in Matschoß, *Briefe*, p. 355.
134. This was confirmed by Werner Siemens, *ibid.* On 12 January 1870, Werner Siemens wrote to Carl that customers were not ready for standardized construction and would not allow themselves to be forced to accept standard forms (SAA BB).
135. Recollections of Jacobi, p. 2.
136. Werner Siemens to his brother Carl on 22 November 1869; similarly on 29 November 1869 (SAA BB).
137. Friedrich von Hefner-Altenneck was born in 1845, son of an art professor who was the Bavarian general curator. He attended gymnasium and polytechnic schools in Zurich and Munich and received his practical training in a mechanics workshop in Munich (SAA WP Hefner-Altenneck).
138. See F. Heintzenberg, *Friedrich von Hefner-Altenneck* (Munich, 1951), p. 5f.
139. Letter of 19 December 1867 (SAA 13/Lk 781). Hübner, the new employee, earned only 30 talers in his first month (SAA 13/Lk 781).
140. This early status symbol of the young engineer who quickly rose to become boss was condemned as an extravagant luxury by secretary Haase. See recollections of Henneberg, p. 5.
141. See *ibid.*, p. 7f.
142. See the list of Hefner-Altenneck's inventions in Heintzenberg, *Friedrich von Hefner-Altenneck*, p. 8.
143. See Kocka, *Unternehmensverwaltung*, pp. 135-40.
144. In the last decades, research on the rise of the factory and the emergence of factory work in nineteenth-century Germany has been substantial, though not abundant. It does allow us to put the case of Siemens into a broader perspective. A synthesis which builds on research until 1989: J. Kocka, *Arbeitsverhältnisse und Arbeiterexistenzen. Grundlagen der Klassenbildung im 19. Jahrhundert* (Bonn, 1990), pp. 373-506, esp. 437-447. A good analysis with a useful bibliography: Richard Biernacki, *The Fabrication of Labor. Germany and Britain 1640-1914* (Berkeley-Los Angeles-London, 1995).

Chapter 2



Family and Bureaucracy in German Industrial Management, 1850-1914

Siemens in Comparative Perspective

Bureaucracy, Family, Industry

When German industrialization began in the 1830s, powerful public bureaucracies had already developed.¹ They increasingly displayed certain characteristics that, in varying degrees and with many modifications, were shared by other large-scale organizations, especially those developed since the end of the nineteenth century. They served as the empirical basis for Max Weber's definition of bureaucracy. According to that definition, used in this essay as a model, "bureaucracy" refers to organizations with highly formalized internal relations, mostly in the form of impersonal, general, written rules; with a practice of handling affairs as cases according to general rules; with a fixed, institutionalized distribution of functions and responsibilities; with a hierarchical, institutionalized pattern of authority corresponding to the distribution of responsibilities; and with an intensive, continuous system of records and files. Persons employed in such organizations hold a specific status; they are appointed on the basis of contractual agreement according to general rules, qualifications, and examinations; they hold tenure and enjoy seniority rights (such as in matters of promotion and salaries) as well as old-age security (pensions). Further, they are expected to display a specific

Notes for this section begin on page 43.

kind of loyalty. "Bureaucracy" also refers to patterns of behavior within such organizations, and to correlated values and beliefs.²

Bureaucratic structures, processes, and values sharply contrasted with some attributes of the type of family prevalent at the beginning of industrialization. Families (especially middle-class families) were based on personal, direct, intimate, and often informal relations. They were characterized by much less specified claims of authority and obedience, a lower degree of functional specialization, and a traditional, emotional loyalty, based primarily on neither financial nor legal relationships.³

In their internal structures and processes, both families and bureaucracies were clearly distinguished from certain patterns, that were essential and specific for industrialization occurring in a capitalist form. In both institutions, the allocation of functions and rewards was not regulated by the market. In neither institution did rewards closely relate to measured achievements. In both families and bureaucracies, competition and risk-bearing were of much less importance than in the market economy, and the profit motive and financial incentives played only minor roles. In Germany the institution of the family had, of course, been in existence long before industrialization began. In contrast to countries like Great Britain and the United States, strong, bureaucratic public administrations were created in the German states before the beginning of industrialization. In Germany as in other continental countries with an absolutist tradition, not only the family but also bureaucratic structures, processes, and patterns were clearly pre-industrial.⁴

Consequently, strong and efficient public administrations played an important role in the process of economic, social, and political modernization in Prussia and in other German states during the early nineteenth century. This role was in part helpful and in part harmful to economic growth. Industrialization was started and continued partly under governmental supervision, partly with limited administrative help, mostly under strong bureaucratic influences. The active role of the bureaucracy was probably accepted by a large majority of the population. In Germany more than in other countries, bureaucratic patterns and ideals thus permeated nearly all sectors of the society.⁵

There were many channels through which bureaucratic patterns spread to the developing factory system and its management. Various amalgamations and interdependencies between governmental agencies and civil servants, on the one hand, and early enterprises, on the other, continued after the mercantilist period. Prussian civil servants acted as entrepreneurs, and the government continued to run some enterprises, especially in mining (until the 1860s), and later in the railroad sector. Civil servants played a leading role in the system of technical and industrial education begun in the 1820s and also in early scientific and indus-

trial associations.⁶ Engineering expertise was concentrated in the Prussian technical administrative branches and in special military units. Technical civil servants and military men were hired by private entrepreneurs who paid higher salaries than the government. A substantial minority of the salaried employees of the Siemens & Halske electric manufacturing company in Berlin were former Prussian civil servants. No doubt they brought bureaucratic patterns, styles, and values with them into the growing enterprises.⁷ In addition, the early entrepreneurs and their employees were influenced by a general value system in which civil servants ranked extremely high. Their favorable public image denoted power, general education, a sense of duty, and security. Bureaucratic patterns and values enjoyed a broad recognition in German society, often to the surprise of visitors from Anglo-Saxon countries.⁸ All these factors contributed to the diffusion of bureaucratic patterns into industry.

The interconnections between the sphere of family relations and the developing factory system are similarly manifold. For centuries, economic activities had prevailed in which household and economic enterprise were closely connected in terms of locality, labor, capital, decision making, and life in general. The rise of the factory system brought a separation between the individual's sphere of living and his sphere of working, between household and enterprise. This reduced the family's direct and permanent influence on economic pursuits.⁹

On the other hand, mutual influences between family and business activities did continue. Pre-industrial family-business relations often survived in industrial enterprises. Furthermore, while urban families were freed from some of their earlier functions, they continued to perform numerous social and ideological functions and to be of strong importance to their members. Especially in the middle classes, the increasingly private families served as protected locations in which the husband and father found emotional safety and relaxation from the pressures of a business, professional, or civil-service life. The more removed the family became from public and economic life (at least in the eyes of its members), the more easily it could be interpreted (and celebrated) in exclusively private, partly emotional, even sentimental terms.¹⁰ It is in this context that one has to understand the strong concern early German entrepreneurs felt for their families.¹¹ The orientation of the founders and owners of factories provided a strong link between family traditions and early industry.

The impact of bureaucratic and family traditions on the development of modern industrial management in Germany, their varying relations to each other, and their changing role in the process of industrial growth are the topics of this study. The discussion of these problems relies heavily on the evidence derived from the experience of Siemens &

Halske, a pioneering firm in the electrical industry. Additional information will be used to put the experience of this enterprise into perspective and to suggest some general conclusions.

Early Years of Siemens & Halske

Siemens & Halske (S & H) was founded in Berlin in 1847 and quickly expanded internationally, opening branches in Saint Petersburg and London by the early 1850s. It produced and installed cables, telegraphs, signals, measuring devices, and other mechanical instruments. In 1857, 1867, and 1872, S & H employed, respectively, 127, 192, and 581 persons in its Berlin headquarters and 240, 480, and 1,010 abroad.¹²

The company was strongly affected by both traditions under discussion, perhaps more so than the average nineteenth-century firm. Werner Siemens, the founder and active leader of the enterprise until 1890, was reared in a middle-class family that consciously explored and cherished its history back into the seventeenth century. The well-being of his family served as an ultimate end, justifying his economic efforts and making his profits and expansions meaningful to him. He later recalled: "From my early youth, I was enthusiastic about founding a world-wide business à la Fugger, which would give power and reputation not only to me but also to my descendants, and which would provide the means to raise also my brothers and sisters and other near relatives on to higher standards of life."¹³

In addition to his strong family ties, the young Siemens was influenced by the military. He received part of his training in a technical military school in Berlin and spent fifteen years in a military career before starting his own business. Thus he initially acquired, in his own words, "an appointment for life as an army officer that is highly regarded in Prussia, a fact which helped me substantially [in my career]."¹⁴

The family orientations and connections of this entrepreneur strongly determined the management of his company in the first two to three decades of its existence, and they were a major factor responsible for the long-range success of Siemens & Halske. As was so often the case, family connections provided most of the initial capital.¹⁵ Management problems, however, turned out to be more difficult than capital needs. As in Great Britain fifty years earlier, or in developing countries today, it was difficult for German factory owners around 1850 to find qualified and reliable officers and office employees. Threatened by frequent frauds, they found loyalty and honesty even more important criteria of employee selection than training and ability.¹⁶ As much as he could, Werner Siemens filled positions that carried decision-making power and

that were hard to control with relatives and close friends. Thus personal loyalty performed functions later provided by direct, often bureaucratic controls, by financial incentives, and by professional ethics. The first salaried employee of the company was a brother of Werner Siemens; the first general manager, his closest friend from school and military years. When a diversification of the production program created new management problems, Siemens responded by establishing an independent company for the production of the new article (alcohol gauges) and by putting one of his cousins in charge of it. Thus family loyalty provided the controls, though informal ones, necessary for successful decentralization of responsibility and authority.¹⁷

The coordination of the three main Siemens branches in Germany, Russia, and Great Britain was primarily achieved by private correspondence and the family-based confidence among the three Siemens brothers, Werner (Berlin), Carl (Saint Petersburg), and William (London), each of whom headed one of the branches without day-to-day interference from the other two. In a time when communication was difficult, the loyalty of the brothers provided a kind of coordinator on the international level that probably could not have been achieved by other means. The importance of these family ties is suggested by the fact that disruptive and dysfunctional conflicts emerged when one of the brothers left his branch or lost influence because of other reasons.¹⁸ The "nepotism" of early industrialists not only served their strong family inclinations but also facilitated the growth and success of the enterprise.¹⁹

To a limited extent, family relations also served as a model for Siemens's labor management. Especially in its first years, the Siemens management apparently felt some responsibility toward its few employees, a feeling that may have been shaped by Siemens's tendency to think in family categories and by traditional master-journeyworker relationships. The shortage of skilled workers and the necessity of securing a stable core of employees motivated Siemens and other industrialists to make conscious use of paternalistic devices and tools of direct, personal leadership in order to induce loyalty and personal attachment to the company. This tendency was strengthened in the late 1860s, as a result of labor unrest. Entrepreneurs often consciously revived paternalistic devices after these devices had declined under the impact of ideals of *laissez-faire* liberalism, strong competition, rapid market changes, and an increasing labor supply.

Traditional and humanistic beliefs, concern about a loyal and permanent core of skilled employees, and the attempt to pacify organized labor thus merged to motivate a type of labor management that offered excursions, parties, gifts, medical benefits, company-based insurance and pension plans, and personal concern to the workers: Especially in its

conservative form, such paternalism had illiberal and repressive consequences. Krupp and Stumm are well-known cases in point. Other enterprises (like S & H) followed a less heavy-handed policy, but they all shared the strong inclination to base their personnel management on additional controls as well as direct orders and financial incentives. In their search for additional instruments of control and motivation, German entrepreneurs utilized traditional, family-related devices to a lesser extent than later Japanese enterprises but probably more than in earlier and contemporary British and American factories.²⁰

Bureaucratic traditions also were clearly visible within the Siemens management. As early as 1855, shop rules were formulated and written down.²¹ Such written and general rules of shop discipline (*Arbeitsordnungen*) were applied in German factories at least as early as the 1830s. They were used to stress the duties of the workers (and sometimes their behavior outside the factories), much more than their rights.²² The Siemens company very quickly developed a system of written and generalized instructions that provided fixed lines of communications within and between the offices. Sources show a well-developed sense of hierarchy and sometimes read like the files of a contemporary administrative agency.²³ This small or medium-size enterprise was marked by a degree of bureaucratization and systematic orderliness that certainly matched and probably exceeded the bureaucratic tendencies in American railroads, which at about the same time pioneered modern systematic management in the United States.²⁴ This high degree of bureaucratization cannot be explained merely as a managerial response to the operational requirements of the enterprise; it also resulted from the acceptance of traditional organizational models developed outside industry.

The influence of bureaucratic patterns from outside the firm was also evident in the status and self-image of the early white-collar employees. Their remuneration by monthly salaries, which were based in part on seniority, their actual job security,²⁵ vacation privileges, and the non-manual nature of the work they performed differentiated them clearly from the wage earners. They were, in these respects only, comparable to German civil servants. Indeed, they were called *Privatbeamte*, and they regarded themselves somewhat inaccurately as a private kind of civil servant bearing delegated authority and deserving certain privileges.²⁶

It should be noted, however, that the bureaucratic tendencies within the management of the early Siemens company were clearly limited by several interrelated factors, more so than in later and larger companies. The strength of family traditions within this organization set a limit to its bureaucratic character. It pointed to the role of personal factors in the recruitment and promotion of personnel, in the performance of the functions of the enterprise, and in the distribution of authority. The power of

the owner-entrepreneur and his closest aides was such that they could cut the hierarchical lines and break through established patterns of communication. Werner Siemens liked to improvise, and he did not always obey the rules of delegated responsibility and authority, even though he endorsed them in principle. The relatively small size and rapidly changing nature of the young enterprise set limits to the repetitiveness of its operations, to the generalization of its processes, and to the institutionalization of its functions. Moreover, the integration of the enterprise into a competitive market economy, its orientation toward measurable achievements and profits, and the resulting financial incentives for employees and competitive elements among them all marked a clear difference between capitalistic enterprises and governmental bureaucracies.²⁷

As far as bureaucratic patterns were adopted, they in general contributed to the success of the business.²⁸ In the early German factories, bureaucratic controls stressing accuracy, punctuality, and regularity tended to check the more traditional, irregular, and slow performance of the still prevailing artisanal first-generation factory workers and thus helped to increase the efficiency of the shop.²⁹ Furthermore, the bureaucratic impact manifested itself in the civil-service ideology of the salaried employees, and thus served the success of the enterprise. Especially since sufficient instruments of direct control (sophisticated accounting techniques, extensive division of labor, easy communication over long distances) did not exist,³⁰ the civil-servant ethos of employees was in the interest of management. This ethos implied "integrity, a sense of duty, unselfish diligence, public spirit, an unbending sense of justice, and unpretentious loyalty."³¹ If more than mere rhetoric, such attitudes and self-images of the early employees fulfilled a function that, during the early industrialization in Britain, was performed in part by professional ethics. They checked the widespread unreliability and fraudulent activities of poorly controlled employees whose loyalty was decisive for many early companies.³² Moreover, their civil service self-images made it impossible for the white-collar employees to consider joining hands with protesting wage earners. They clearly identified themselves with management and regarded the blue-collar force as different and inferior. In later years at least, management maintained some of the white-collar privileges because doing so helped provide stability and loyalty.³³

Growth and Management Crisis

While this combination of family-oriented and bureaucratic management techniques (as well as increasing reliance on financial incentives) contributed to the company's overall success during the first two and a

half decades of its existence, the same combination hindered its further growth in the 1870s and 1880s. What had been an asset became, under changing conditions, a liability.

In 1882 Siemens employed about 1,000 persons in Germany alone, and by 1890 the number had grown to 3,000. New products and new markets were developed. Most important were the introduction of the telephone and the new high-voltage branch (generators, motors, electric lights, streetcars, industrial equipment, etc.). These changes brought rapid growth and extensive diversification, which substantially changed the technological and commercial needs of the firm.

In the course of these spectacular changes, the number of electrical manufacturers increased quickly, and Siemens's traditional leadership was challenged. By 1890, Siemens was only the second largest German electrical company in terms of turnover and capital stock. It had fallen behind Emil Rathenau's new and aggressive Allgemeine Elektrizitäts-Gesellschaft (AEG), which had been founded on the basis of Edison's patents in 1883-1887, and which specialized exclusively in high-voltage projects.³⁴ Among the causes of this relative decline of the Siemens company, managerial weaknesses seem to have been paramount.

In contrast to the earlier period, and quite similar to what has been reported about French family enterprises,³⁵ the family-related goals and techniques of the owner-entrepreneur became dysfunctional for the further growth of the company. In a growing establishment, Werner Siemens increasingly came to realize that his personal, family-related, spontaneous leadership, which had been so useful in previous years, had become inadequate. His direct and personal contact with his salaried employees had been a conscious element of his personnel management techniques. Now he deplored his weakening memory and the fact that he personally knew only half of his eighty *Beamte*.³⁶ Growing anonymity, the introduction of new technology, the diversification of the production program, the new competition, and the consequent complication of the internal management overburdened the aging owner. In 1882 he wrote his brother that "there are innumerable matters to be promoted technically and scientifically, and it gets increasingly difficult to keep the different branches of the business apart so that a harmonic management is made possible. This situation cannot continue much longer."³⁷

Despite several attempts at reorganization, Werner Siemens never succeeded in delegating enough responsibilities and in creating a systematic organization at the top. In accordance with his early experiences, he reserved more decisions and responsibilities for himself and his closest aides than they could handle.³⁸ In a quickly expanding enterprise, strong, active, dynamic leadership was incompatible with a personal, spontaneous style.³⁹ Siemens proposed "to simplify our business, which

has already become too complicated, and thus make it more manageable for our successors," that is, for his (and his brother's) sons.⁴⁰ Such a policy would also make the use of larger amounts of outside capital (and thus the acceptance of outside influences) superfluous.

Siemens's reluctance to enlarge and to complicate his business was the most important reason why Emil Rathenau was able to build up a threatening rival company in less than ten years. The commercial application of new technology, especially the systematic electrification of the cities, required large amounts of capital, which was not available without the assistance of banks and the stock market. It also required new organizational devices in the form of semi-independent corporations that would promote, finance, install, sell, and service huge electrification projects and act as intermediaries between the producing firm and the customers.⁴¹ In such corporations, production companies and consortiums of banks worked together, sharing costs, profits, and power. Close relations between banks and manufacturing enterprises developed in Germany.

Werner Siemens could not accept this aspect of the large-scale organizations that were starting to develop in the early 1880s. Because he refused to share power with outsiders, he decided not to create his own installation and service branch to handle the promising high-voltage projects. Rather, he left these activities largely to the younger, less tradition-oriented Emil Rathenau and the banks supporting him. He agreed to a contract that left most marketing and service operations to Rathenau and reserved the production work for S & H. This arrangement did not work, and finally Siemens came to realize that he had essentially supported the growth of a company that became his most powerful rival.⁴²

The family-based recruitment of the top managers, which had previously contributed to the success of S & H, intensified and prolonged the management crisis of the 1880s. A logical consequence of Siemens's family orientation was his unquestioned belief that his sons would take over once he retired. When the first son appeared to be unsuited for such a position and the second fell seriously ill, Werner Siemens felt it necessary to stay active longer than he originally desired. He also refused to hire qualified outsiders for top positions, because he distrusted the "strangers" and did not believe that an outsider could manage even a part of his complicated, personally shaped *Geschäft*. He did not bother with systematic internal training of promising junior executives (except in the case of his sons, who circulated from one department to the other), but instead relied, as long as possible, on his old employees, with whom he was familiar enough to practice his personal and direct management style.⁴³

Such family-oriented management had become less necessary and partly obsolete: more managerial talents were available and could have been hired; new techniques of control had been developed and could have been applied.⁴⁴ Furthermore, family-oriented management became less effective under changing conditions of growth; insofar as it was relied upon, a vacuum of leadership was the consequence.⁴⁵

The semibureaucratic character of the Siemens company continued in the 1870s and 1880s. Though not so clearly as in the case of the family orientation, some of the bureaucratic traditions of this enterprise also became somewhat dysfunctional. The growth of competition and the changing market increased the risk involved in all bureaucratic handling of customers.⁴⁶ Innovation was no longer a task for Werner Siemens and one or two friends; it had become a collective process. Under these circumstances, rigid adherence to the institutionalized distribution of responsibilities and authorities slowed down and discouraged the innovative process.

Organizational "bottle necks" appeared, and potentially fruitful ideas and initiatives were rejected by the person "in charge" because they were offered by an employee whose function was somewhat different in terms of the formal order of the office.⁴⁷ Some departments tried to be self-sufficient, serving their own interests rather than those of the whole enterprise. An extreme tendency to stick to the formalized channels of communication and an extensive use of written "orders" and "propositions," again in a bureaucratic style, often between persons who had desks on the same floor, contrasted sharply with the reported practices in a contemporary American electrical manufacturing enterprise in which written rules were rare and looked upon as a "necessary evil."⁴⁸

These signs of rigid bureaucratization of the middle management were compatible with, and even reinforced by, the overall lack of coordination due to the inadequate leadership. A pattern of partial bureaucratization without overall planning developed, which often was detrimental to bold, quick, and efficient decisions and operations.⁴⁹

The Multidivisional Enterprise

In 1890 Werner von Siemens (he had been ennobled in 1888) retired, and his son Wilhelm took over. This change of leadership marked the beginning of an extremely successful period of growth in which the "Haus Siemens" succeeded in catching up with its main rival.⁵⁰ The rate of growth accelerated, especially after 1895. By 1913 the German Siemens enterprises employed more than 57,000 persons in contrast to 3,000 in 1890. The employment figure of the international concern as

a whole was 81,795 in 1913 compared to 5,545 in 1890.⁵¹ Turnover (the British and Russian branches excluded) increased from 16.5 million marks (1890) to 31 million (1895-1896), to 92 million (1903-1904), and finally to 415 million in 1913-1914. The high-voltage products and projects made up the bulk of these sums, after 1903-1904 for about three-quarters.⁵²

Confronted with growing and aggressive competitors and an increasing demand for capital that could not be satisfied on a purely family basis, the Siemens family was compelled to transform its enterprise into a joint-stock company in 1897 and to grant some influence to the Deutsche Bank. The depression of 1900-1902 hit the electric industry hard and caused a general merger movement, driving Siemens to join forces with the staggering Schuckert Company. The high-voltage side was separated from S & H and merged with the Schuckert plants (which specialized exclusively in high-voltage products) into an independent company, the Siemens-Schuckertwerke GmbH (SSW) in 1903. S & H, in which the Siemens family retained a very substantial majority of capital stock, continued the production and sale of low-voltage articles and served as the holding company for SSW. Siemens & Halske had a nominal capital of 35 million marks in 1897, 54 million in 1900, and 63 million in 1908. SSW had capital of 90 million marks, a slight majority of which was held by S & H.⁵³ Besides these capital connections, interlocking appointments and contracts provided links between both corporations.

Tendencies toward vertical integration were clearly visible. On the one hand, some factories producing raw material and semifinished goods (rubber, wire, china, and paper) were acquired. On the other hand, a very elaborate network of sales departments and offices was established all over the country and abroad, staffed with salaried personnel and centrally controlled from Berlin. This sales organization seems to have followed an example set by the AEG, along the lines developed simultaneously by (Edison) General Electric in the United States.⁵⁴ Vertical integration was accompanied by extensive diversification of the production and sales program. This complicated empire was governed from Siemensstadt, on the outskirts of Berlin, where on the eve of the war a new administrative building housed the general office, the top managers' offices, and nearly three thousand office employees.

This process of expansion and diversification was linked to a profound reorganization, which modified the company's mixture of family and bureaucratic traditions. As in the case of many other companies, the replacement of the founder – Henry Ford, Cyrus McCormick, and William Dow are some American cases in point – facilitated the reform. Wilhelm von Siemens began to hire a considerable number of technical,

scientific, and commercial experts from other enterprises and from academic life, thus replacing long-serving employees and suspending the bureaucratic principle of seniority. It was he who, for the first time, created a central office with a small, qualified staff. Most information reached him only through this office, which took part in the preparation and formulation of general policy according to written rules and regulations, although some vagueness (and conflict) remained about the extent of its powers.⁵⁵ Siemens also adopted certain systematic administrative techniques (for instance, weekly reports from the divisions and departments) as well as a new system of departmental budgets, and he tried to strengthen the administrative uniformity and cooperation between the individual units.

The old family traditions did not completely disappear, but they were very much weakened by the expansion and systematic reorganization of the enterprise. As far as they survived (mainly on the top management level), they were no longer dysfunctional, but even contributed to the flexibility and strength of the management. Once Wilhelm von Siemens had decided to go ahead with reorganization, and once he adopted systematic, antitraditional leadership techniques, he could (and did) use his family relations as an additional source of legitimization and strength to bring change. As the son of a most celebrated industrialist, and as the unquestioned spokesman for the family that owned a controlling interest, he exerted tremendous influence in both corporations. He combined powerful positions in both boards of directors with the chairmanship of the executive board of Siemens & Halske and a more informal, but strong, influence in the management of SSW. He not only provided an important link between the two corporations but also served as an unspecialized "generalist." He thus successfully achieved changes that a man endorsed by the banks had previously failed to make because of the resistance and jealousy of the unit heads and the reluctance of the Siemens family to accept him.⁵⁶ It was due to Wilhelm's immense authority that the thorough reforms of the top management structure, which challenged the inertia and domain of some powerful senior officials, could be carried through without many conflicts.⁵⁷

To a certain extent, the traditional bureaucratic tendencies of the Siemens concern were strengthened by the expansion and reorganization of the 1890s. Not only did the top management adapt a more systematic approach and subject itself to impersonal, general rules. On the middle-management levels, within the huge white-collar departments, and in the management of the shop, bureaucratic tendencies also became more manifest than ever before. The sales departments and field offices, while behaving flexibly in the market, worked according to highly detailed, centrally issued regulations. They were organized like public

administrations, and most of the activities performed in them were highly specialized and routinized.⁵⁸ By 1910, S & H introduced a revised shop organization. The planning and control of the factory work now took place in new planning offices in advance, clearly separated from operations in the shop. The standardization of products and operations progressed. A painstaking system of written prescriptions and controls, using forms and cards of different colors to an unprecedented extent, was supposed to rationalize the production process.⁵⁹

The number of salaried employees increased both in absolute and in relative terms. The ratio of non-manual to manual workers was 1:11.3 in 1865, 1:7.1 in 1890, and 1:3.5 in 1912. In many respects the status of the 12,500 Siemens salaried employees (1912) had become more similar than before to the status of employees in public bureaucracies. Most of them (except those at the top) received salaries in which achievement criteria played a smaller and seniority a larger role than in previous years. They were treated according to general rules about recruitment, remuneration, promotion, fringe benefits, and controls. Generalized qualifications (degrees from technical, commercial, and general schools) had gained emphasis in the process of recruitment. Most of them performed highly specialized, routinized functions within a rigid network of regulations, in hierarchically structured departments and offices.⁶⁰

Such changes indicated increasing bureaucratization, which resulted from many different factors: from the mere expansion of the enterprise as such; from the technological refinement and the accuracy required by expensive and complicated machinery; from the increased application of science and the correlated importance of qualifications acquired in schools; and from the requirements of more sophisticated accounting and sales methods. Although influences from outside public bureaucracies continued to play some role, this development around the turn of the century was largely the product of changes occurring within the enterprise. While up to 1890 the bureaucratic features of Siemens management had resulted largely from outside influences, they were now reinforced by an internally generated process of industrial bureaucratization typical of all large-scale industry.⁶¹

Many limits to the bureaucratization of the Siemens management remained, however. On the top management level, informal, personal factors continued to play a role.⁶² Nonhierarchical patterns of cooperation between departments were consciously stressed. As employees of a private corporation, the white-collar employees still differed from public civil servants in many respects.⁶³ In addition, the new leadership, while systematizing top management, deliberately moved to check the bureaucratic tendencies by introducing decentralized patterns into the organizational structure of the enterprise.

To replace the previous overall standing order, framed in 1882 in vague terms and tailored for a central, omnipresent, dynamic, entrepreneur,⁶⁴ Wilhelm von Siemens introduced a new code that not only was more specific but also extended the functions and authorities of the heads of the plants and departments.⁶⁵ This decentralization was partly motivated by Wilhelm's expressed desire to hire first-class experts and administrators from outside who would accept job offers only if they were granted a high degree of autonomy.⁶⁶ No doubt the heterogeneity, complexity, and size of the company were other factors determining these deliberate organizational moves. Unlike corporations resulting from mergers (like General Electric), organization-building at Siemens required systematic and planned decentralization, delegation of authority as well as the creation of counterbalancing tools for control and efficient central decisions.⁶⁷ The product of these deliberate changes was a new organizational pattern that successfully combined systematic orderliness and centralized policy making with flexible decentralization in a highly diversified, multidivisional firm. Only the main features of this pattern can be sketched in this essay.

A Decentralized Structure

The two Berlin-centered companies, S & H and SSW, were composed of twelve units, six in each firm.⁶⁸ On the low-voltage side (S & H), all but one unit had a production department, a technical and planning department, a sales department, an accounting and administrative department (*Kaufmännische Abteilung*), and a central office (*Direktion*) as well.⁶⁹ In other words, Siemens & Halske was not organized along functional but along product (or regional) lines. Though far less independent than multifunctional units in a loose alliance or federation (such as Standard Oil in the 1870s and early 1880s),⁷⁰ these divisions were equipped for much more autonomous behavior than the vertically integrated, centralized, functionally departmentalized organizations that were so typical for the most developed large-scale corporations in the United States before 1920.⁷¹ Due to technological differences and peculiar requirements on the high-voltage side, each of the units of SSW had only four of these five departments. They lacked either the production or the sales department.⁷² Nevertheless, they were relatively autonomous units in the corporation's internal price system, which incorporated non-bureaucratic market elements into this essentially nonmarket organization and provided limited competition between the plants and departments. The units, whose success or failure was visible on departmental accounts in terms of gains and losses according to centrally set

prices, treated one another, to a limited extent, as if they were independent competitors. The system made it easier to locate inefficiencies and also added achievement inducements.⁷³

On the other hand, an elaborate and systematic administration was established that provided for central control, decision making, and administrative supervision at the top. Top managers were free to concentrate on basic policy, the allocation of capital equipment and personnel, external relations, legal topics, patents, overall organization, and labor management. Two executive boards (*Vorstände*), in which most of the unit heads as well as top officers with functionally defined activities met regularly, were included. Two differentiated general offices participated in the formulation and administration of the companies' overall policies. Regular reports, statistics, charts, and a high degree of administrative standardization permitted effective surveys and controls. An increasing number of central staff departments fulfilled several functions either for one company or for both. They specialized systematically on activities necessary for the supervision, coordination, and standardization of the whole. Such departments existed for the coordination of construction, research, and development; for the purchase of raw materials; for the supervision of the sales field offices; for the organization of overseas exports; for legal, economic, and public relations; and for central accounting. Finally a flexible system of top committees was developed in which various board members and other top officers came together irregularly.

In essence, though not in a pure form and with some restrictions (especially on the high-voltage side), the Siemens concern thus had developed the specific decentralization pattern of the highly diversified, multidivisional enterprise ten to twenty years before du Pont and General Motors first adopted it in the United States during the early 1920s.⁷⁴

The large electrical manufacturing companies probably were in the vanguard in terms of systematic organization and management, due to several factors: their stress on a scientific technology and their strong inclination toward recruiting well-trained personnel (to a great extent from academic institutions); their application of large amounts of fixed capital and very technologically complex machinery; and a large percentage of non-manual work. In addition to these factors, the vigorous competition around 1900 seems to have induced the surviving electrical giants to develop an unsurpassed degree of organizational rationality.⁷⁵ Furthermore, Siemens was in a special situation. As the pioneering enterprise in the field, it took pride in its early achievements and stressed that it had always applied itself to the entire range of electrical manufacturing. The Siemens concern thus differed from all its German competitors as well as from General Electric and Westinghouse, which concentrated

mainly on the high-voltage side.⁷⁶ This elaborate pattern of diversification – apart from other internal factors, which are hard to separate – seems to have induced the Siemens management to develop the complex organizational device described above very early.

Conclusion

As a result of the specific conditions of German industrialization, bureaucratic patterns strongly influenced the development of industrial management. They were largely induced from outside the industrial sector and contributed to the managerial success of early manufacturing firms. Similarly favorable was the early impact of family traditions. When the enterprise grew and the requirements of production and market changed, however, this particular combination of family-related and bureaucratic traditions became dysfunctional. Reorganization after 1890 altered the traditional bureaucratic tendencies of the Siemens concern and reduced the importance of the family traditions. Under the new technological and commercial conditions, bureaucratization continued as a result of changes inside the industrial enterprise rather than as a result of outside influences. Insofar as they survived, family traditions could once again contribute to the success of the company because they made reorganization easier. After the skillful modernization of the firm, the historic, traditional patterns of bureaucracy could be used in a situation in which bureaucratic management was indispensable. If bureaucratic organizations had not preceded the rise of the multifunctional firm, they would have, it seems, been developed when it appeared.⁷⁷ While being modified and adjusted, existing industrial bureaucracies could be utilized by German large-scale enterprises during this new period of growth. This seems to be in marked contrast with American big business, which did not develop elaborate bureaucratic structures (except in the railroads) until the 1890s. In Germany existing structures could be applied, but had to be adjusted to new strategies and operations.⁷⁸ Within these structures, the need for systematic management, for increasingly professional personnel with formal training from outside schools, and for accuracy and rational organization could more easily be met.

In contrast, contemporary British industry was much less systematic and bureaucratic and suffered from management deficiencies that often have been blamed for its relative decline late in the nineteenth century and early in the twentieth.⁷⁹ A close comparison might show that during the late nineteenth century American enterprises lagged behind comparable ones in Germany insofar as systematic, orderly, efficient overall management was concerned.⁸⁰ In the light of such tentative com-

parisons, it may be suggested that the specific bureaucratic traditions of German industrialization, which facilitated the development of efficient, rationalized management, contributed to the successful expansion of German industry in the two decades before the First World War.⁸¹

Notes

1. See W.G. Hoffmann, "The Take-Off in Germany," in *The Economics of Take-Off into Sustained Growth*, ed. W.W. Rostow (London, 1964), pp. 95-119, esp. 96 for the first period of German industrialization from the mid-1830s to 1873.
2. For the purposes of this essay, this "ideal type" seems sufficient. See M. Weber, *Wirtschaft und Gesellschaft*, ed. J. Winckelmann, 2 half-volumes (Cologne/Berlin, 1964), pp. 160-66, 703-38. Weber's concept applies better to public administrations around 1900 than to those in 1830. Most of the above-mentioned attributes already existed, though were less developed, in the German *Vormärz*, especially in Prussia. See H. Rosenberg, *Bureaucracy, Aristocracy, and Autocracy* (Cambridge, MA, 1958); R. Koselleck, *Preussen zwischen Reform und Revolution* (Stuttgart, 1967).
3. For a definition of the modern family stressing its character as a primary group, its intimacy, and its cooperative features see R. König, *Materialien zur Soziologie der Familie* (Bern, 1946), pp. 103-131, esp. 119.
4. A.D. Chandler, Jr., and L. Galambos recently stressed the temporal differences between the development of largely private bureaucracies (since the 1870s) and the development of coordinating and regulating public bureaucracies (which remained relatively weak until the 1930s) in the United States. See their "The Development of Large-Scale Organizations in Modern America," *Journal of Economic History* 30 (March 1970): 201-207. In Germany the pattern was reversed.
5. The Prussian-German experience not only differed from prebureaucratic Anglo-Saxon industrialization. It also was peculiar if compared with other European countries, such as France. Here, it is true, a strong central bureaucracy had developed before industrialization; but the processes of economic, social, and political modernization occurred in France with more criticism, rejection, and distrust of the governmental authorities and their interventions than in neighboring Prussia. The bureaucratic permeation of the French social fabric thus remained much weaker. See Koselleck, *Preussen*; L. Beutin, "Das Bürgertum als Gesellschaftsstand im 19. Jahrhundert," in *Gesammelte Schriften* (Cologne/Graz, 1963), p. 284ff.; W.O. Henderson, *The State and the Industrial Revolution in Prussia 1740-1840* (Liverpool, 1958); W. Fischer, *Der Staat und die Anfänge der Industrialisierung in Baden 1800-1850* (Berlin, 1961); C.P. Kindleberger, *Economic Growth in France and Britain, 1851-1950* (Cambridge, MA, 1964), p. 193; F. Goguel, "Six Authors in Search of a National Character," in *In Search of France* (Cambridge, MA, 1963), p. 369.
6. For examples of close connections between government agencies and industrial enterprises in the mercantilist period: R. Rachel, *Das Berliner Wirtschaftsleben im Zeitalter des Frühkapitalismus* (Berlin, 1931), pp. 14, 123, 142. For the active role of Prussian civil servants around 1800, see F. Redlich, "The Leaders of the German Steam-Engine Industry during the First Hundred Years," *Journal of Economic History* 4 (1944): 121ff.; F. Zunkel, "Beamtenschaft und Unternehmertum beim Auf-

- bau der Ruhrindustrie 1849-1880," *Tradition* 9 (1964): 261-76; H.D. Krampe, *Der Staatseinfluss auf den Ruhrkohlenbergbau in der Zeit von 1800-1865* (Cologne, 1961). For technical and industrial schools and associations: *Chronik der Kgl. Technischen Hochschule zu Berlin 1799-1899* (Berlin, 1899); F. Schnabel, *Die Anfänge des Technischen Hochschulwesens* (Karlsruhe, 1925); C. Matschoß, *Preussens Gewerbe-förderung und ihre grossen Männer* (Berlin, 1921); C. Matschoß, "Geschichte der Königlich-Preussischen Technischen Deputation für Gewerbe," *Beiträge z. Gesch. d. Technik u. Industrie* 3 (1911): 239-53.
7. In 1850 Prussia had an engineering corps of 220 officers and four thousand men. See J. Kocka, *Unternehmensverwaltung und Angestelltenschaft am Beispiel Siemens 1847-1914* (Stuttgart, 1969), p. 177ff., for the Prussian technical civil service, and p. 101 for former civil servants among Siemens employees. An example of a civil servant hired by a private railroad company is in V. v. Unruh, *Erinnerungen aus dem Leben*, ed. H. v. Poschinger (Stuttgart, 1895). The participation of civil servants in private railroad building became a problem for Prussian authorities, who tried to reduce this steady loss of trained personnel. See Beuth's ordinances from 25 September 1844 and 31 March 1845, in L. v. Rönne and H. Simon, *Die Baupolizei des Preussischen Staates*, suppl. (Breslau, 1852), p. 44f.
 8. See, e.g., S. Laing, *Notes of a Traveller*, 2d ed. (London, 1854), pp. 95ff., 121ff. Rather similar fifty years later is S. Whitman, *Imperial Germany* (Boston, 1899), pp. 88-115. The popularity of the civil service was reflected by a tremendous run on open positions. See Koselleck, *Preussen*, p. 438ff., 444. See also the recognition of a leading industrialist: W. Siemens, *Lebenserinnerungen*, 17th ed. (Munich, 1966), p. 47.
 9. See M. Weber, *Wirtschaftsgeschichte*, 2nd ed. (Munich, 1924), p. 199ff.; and W. Sombart, *Der moderne Kapitalismus*, vol. 1, 3rd ed. (Munich-Leipzig, 1919), p. 321ff. See also W. Sombart, "Die Entstehung der kapitalistischen Unternehmung," *Archiv f. Sozialwissenschaft und Sozialpolitik* 41 (1916), p. 300ff.
 10. See O. Brunner, "Das 'Ganze Haus' und die alteuropäische Ökonomik," *Neue Wege der Verfassungs- und Sozialgeschichte*, 2nd ed. (Göttingen, 1968), pp. 103-127; J. Habermas, *Strukturwandel der Öffentlichkeit*, 3rd ed. (Neuwied/Berlin, 1968), pp. 55-63; H. Schelsky, *Wandlungen der deutschen Familie in der Gegenwart*, 2nd ed. (Stuttgart, 1954), pp. 19f., 150ff.; F. Oeter, "Die Familie als soziale Funktionseinheit," *Familie und Gesellschaft*, ed. F. Oeter (Tübingen, 1966), pp. 1-22; E.K. Bramsted, *Aristocracy and the Middle-Classes in Germany*, rev. ed. (Chicago/London, 1964), pp. 200ff., 214f. See also W.H. Riehl, *Die Familie* (Stuttgart, 1885), critical from a reactionary standpoint, but with some sharp observations: see, e.g., p. 150 for the transition from previous extended family life, including servants, to smaller, more intimate relations. Similarly critical, but from a socialist viewpoint, is Müller-Lyer, *The Family* (New York, 1931), p. 241ff.
 11. See F. Zunkel, *Der rheinisch-westfälische Unternehmer 1834-1879* (Cologne/Opladen, 1962), p. 72f.
 12. For an informative history of the Siemens enterprises, see G. Siemens, *History of the House of Siemens*, 2 vols. (Freiburg/Munich, 1957); for more recent literature on the history of Siemens cf. chapter 1, note 2 above. New results with respect to industrial organization, management, and work at Siemens and beyond in: H. Homburg, *Rationalisierung und Industriearbeit. Arbeitsmarkt-Management – Arbeiterschaft im Siemens-Konzern Berlin 1900-1939* (Berlin, 1991).
 13. Werner to Carl Siemens, 25 December 188, in: C. Matschoß, ed., *Werner Siemens* (Berlin, 1916), p. 911. For his family background and concern, see W. Siemens, *Lebenserinnerungen*, pp. 12, 30, 34. Two more recent biographical sketches are: K. Busse, "Werner Siemens," in *Die Grossen Deutschen*, 5 vols. (Berlin, 1956), vol. 3, pp. 422-55; and S. v. Weiher, *Werner von Siemens* (Munich, 1966).
 14. See W. Siemens, *Lebenserinnerungen*, pp. 20ff., 298f.
 15. A cousin provided for nearly 7,000 taler. See G. Siemens, *History*, vol. 1, p. 17.

16. Werner Siemens called the salaried personnel the company's "Achilles' heel" in a letter to Carl Siemens, 21 December 1857, in: Matschoß, *Werner Siemens*, p. 125. "My yardstick for salaried employees is whether they never put their own interests beyond the company's interest, or whether one cannot rely on that" (Werner to Carl Siemens, 7 April 1880, in Werner von Siemens Institute, Munich, Siemens-Archiv-Akte (hereafter cited as SAA) Briefsammlung (hereafter cited as BB). Similar problems in Great Britain are mentioned by S. Pollard, *The Genesis of Modern Management* (London, 1965), p. 17ff., *passim*; also Harbison and Myers, *Management in the Industrial World* (New York, 1959), pp. 49, 87ff., with respect to recently developing countries.
17. See Werner to Carl Siemens, 12 December 1847, in Matschoß, *Werner Siemens*, p. 51, for the first office employee, Friedrich Siemens; for William Meyer ("Oberingenieur und Prokurist"), see W. Siemens, *Lebenserinnerungen*, p. 272; R. Ehrenberg, *Die Unternehmungen der Brüder Siemens* (Berlin, 1906), p. 458; for the foundation of "Gebrüder Siemens" under Louis Siemens, see the contract of partnership from 14 December 1872 (SAA 21/Lc 594).
18. For details of the international coordination, see Kocka, *Unternehmensverwaltung*, pp. 76, 82, 132f, 207, 253. For conflicts between Siemens Brothers London and S & H Berlin in the 1880s: S. v. Weiher, "Die Entwicklung der englischen Siemens-Werke und des Siemens-Überseegeschäftes in der zweiten Hälfte des 19. Jahrhunderts" (Diss., Freiburg/Br., 1959), p. 156ff. Carl Siemens left Saint Petersburg in 1867. See Ehrenberg, *Die Unternehmungen*, p. 97ff.
19. For British examples, see S. Pollard, "The Genesis of the Managerial Profession," *Studies in Romanticism* 4 (Winter, 1965): 63f. See also H.J. Habakkuk, "The Historical Experience on the Basic Conditions of Economic Progress," in *Economic Progress*, ed. L.H. Dupriez (Louvain, 1955), p. 159, who regards the family firm as a main agent of rapid industrial progress in the nineteenth century.
20. Werner Siemens' statements of his labor policy principles: Werner to Carl Siemens, 21 December 1857, and to Stülpnagel, 19 November 1875, in Matschoß, *Werner Siemens*, pp. 125f, 482; W. Siemens, *Lebenserinnerungen*, p. 324. Labor shortage: Werner to Carl Siemens, 15 December 1854 and 29 April 1872 (SAA BB). For a sympathetic overview, see K. Burhenne, *Werner Siemens als Sozialpolitiker* (Munich, 1932). For the company's insurance plan of 1872, in addition, SAA 14/Lm 727, and W. Siemens, *Lebenserinnerungen*, p. 297. E.C. McCreary, "Social Welfare and Business," *Business History Review* 42 (Spring, 1968): 24-49; A. Ascher, "Baron von Stumm," *Journal of Central European Affairs* 22 (October, 1962): 271-85. Other examples of paternalism in German enterprises are in L.H.A. Geck, *Die sozialen Arbeitsverhältnisse im Wandel der Zeit* (Berlin, 1931). Some comparisons between Germany, Britain, and the United States are in A. Shadwell, *Industrial Efficiency* (New York, 1909). Examples of "familism" in Japanese factories: B. K. Marshall, *Capitalism and Nationalism in Prewar Japan* (Stanford, 1967), p. 62ff.; J. Hirschmeier, "The Japanese Spirit of Enterprise 1867-1970," *Business History Review* 44 (Spring, 1970): 13-38, esp. 28.
21. See W. Meyer to Werner Siemens, 9 June 1855, on a "Werkstattdienstinstruktion" (SAA 2/Lh 849). The shop rules of 1872 and 1895 are reprinted in Kocka, *Unternehmensverwaltung*, p. 575ff.
22. See Fischer, *Der Staat*, p. 357, for an example from 1837; O. Neuloh, *Die deutsche Betriebsverfassung und ihre Sozialformen bis zur Mitbestimmung* (Tübingen, 1956), p. 79, mentions the wide application of such rules in the 1870s. For an early British example (1821), see Pollard, *The Genesis*, p. 216.
23. See the correspondence between W. Siemens and W. Meyer in 1855 (SAA 2/Lh 849). An early example of written office rules is mentioned by W. Köllmann *Friedrich Harkort* (Düsseldorf, 1964), vol. 1, p. 187 (Harkort's mechanical factory in Wetter-Ruhr. 1830).

24. A.D. Chandler, "The Railroads: Pioneers in Modern Corporate Management," *Business History Review* 39 (Spring, 1965): 16-40. It is, however, interesting to recognize that Siemens (like the railroads) was partly engaged in services (installation and maintenance of telegraph lines and cables), and it might well be that systematic, bureaucratic nongovernmental management was first developed in service enterprises, not in pure production establishments.
25. Werner Siemens, partly as a consequence of the tense labor market, the limited exchangeability, and the confidential positions of his salaried employees, partly on a traditional basis, followed the principle of not laying off one of his salaried employees "as long as he is not guilty of anything, even if we don't have anything for him to do" (to William Siemens, 14 May 1858, SAA BB).
26. For details, see J. Kocka, "Industrielle Angestelltenschaft in frühindustrieller Zeit," in *Untersuchungen zur Geschichte der frühen Industrialisierung vornehmlich im Wirtschaftsraum Berlin-Brandenburg*, ed. O. Büsch (Berlin, 1971).
27. For some remarks on the financial incentives used at Siemens, see Werner to Carl Siemens, 16 June 1868 and 29 November 1869, in Matschoß, *Werner Siemens*, p. 292, and SAA BB; Burhenne, *Werner Siemens*, p. 64ff; for the role of financial incentives in early German management in general, see J. Kocka, "Management und Angestellte im Unternehmen der industriellen Revolution," in *Industrielle Revolution*, ed. R. Braun and W. Fischer (Cologne, 1971).
28. There were some minor disadvantages, however. A certain slowness and formality in the treatment of customers was included, but the most important customers were large, partly bureaucratic organizations themselves (government agencies, railroads), and did not mind too much. Also, the bureaucratic orientation of certain employees may have reduced their innovative ability and initiative. On the other hand, with a society largely convinced of bureaucratic values and virtues, a bureaucratic image could even become an asset in terms of public relations.
29. While former officer and civil servant W. Meyer was the strongest advocate of bureaucratic regulations, the employees in the shop, the supervisors, and the artisan Halske (co-founder) tried to resist his attempts at systematization. See W. Meyer to W. Siemens, 13 October 1856, and W. Siemens to W. Meyer, 18 October 1856 (SAA 2/Lh 849).
30. See F. Redlich's remarks in *Economic Change in the Civil War Era*, ed. D. Gilchrist (Greenville, Del., 1965), p. 158f. Redlich stresses progress in the development of communication and transportation as a condition of more centralized forms of control.
31. O. Hintze, "Der Beamtenstand," in *Soziologie und Geschichte* (Göttingen, 1964), p. 77.
32. For the British alternative, see Pollard, *The Genesis*, p. 129ff.
33. See Kocka, *Unternehmensverwaltung*, pp. 303-311, 507-513.
34. P. Dunsheath, *A History of Electrical Engineering* (London, 1962); G. Siemens, *History*, vol. 1; F. Pinner, *Emil Rathenau und das elektrische Zeitalter* (Leipzig, 1918); K. Helfferich, *Georg von Siemens*, 3 vols. (Berlin, 1921-1923), vol. 2, p. 120. In 1890, the capital stock of the AEG amounted to 20 million marks; that of S & H, 14 million. There were eighty-one electrical manufacturers with 1,157 employees in Germany in 1875; by 1895 the figures had increased to 1,326 and 26,321, respectively. See H. Gutenberg, "Die Aktiengesellschaften der Elektrizitätsindustrie" (Ph.D. diss., Berlin, 1912), p. 2.
35. See D.S. Landes, "French Entrepreneurship and Industrial Growth in the Nineteenth Century," *Journal of Economic History* 9 (1949): 52ff. see also D.S. Landes, "French Business and the Businessman" in *Explorations in Enterprise*, ed. H.G.J. Aitken (Cambridge, MA, 1965), p. 185ff.; J.R. Pitts, "Continuity and Change in Bourgeois France," in *In Search of France*, p. 261.
36. Werner to Carl Siemens, 6 February 1882 (SAA BB).

37. Werner to Carl Siemens, 20 February 1882 (SAA BB). See also W. Siemens's letters of 10 June 1874, 26 November 1877, 14 December 1878, 3 January 1879, 27 August 1880, 12 February 1881, in Matschoß, *Werner Siemens*, pp. 448, 544f., 593, 597, 671, 686.
38. For his continued feelings of being overworked, see his letters of 5 May 1882, 22 January 1884, 29 October 1886, 22 December 1883, in Matschoß, *Werner Siemens*, pp. 732, 804f, and in SAA BB.
39. See the recollections of engineer Grabe, who was hired in the 1880s (SAA 12/Lk 801, p. 2). Criticism of this "one-man-regime" was raised by contemporary authors, which points to the fact that this was a difficulty not restricted to Siemens. See L. Sinzheimer, *Über die Grenzen der Weiterbildung des fabrikmäßigen Grossbetriebes in Deutschland* (Stuttgart, 1893), p. 252.
40. Werner to Carl Siemens, 16 March 1883, in Matschoß, *Werner Siemens*, 774.
41. For a good description of this system as far as the AEG was concerned, see Pinner, *Emil Rathenau*, 186ff; also Helfferich, *Georg von Siemens*, vol. 2, 111ff.; mainly for the years after 1890, but with special reference to the role of the banks: R. Liefmann, *Beteiligungs- und Finanzierungsgesellschaften* (Jena, 1913), pp. 81ff., 358ff., 456ff.; O. Jeidels, *Das Verhältnis der Grossbanken zur Industrie* (Leipzig, 1905), p. 230ff.
42. For details of the first years of Rathenau's German Edison Company (since 1887: AEG): Helfferich, *Georg von Siemens*, vol. 2, pp. 38-93, Pinner, *Emil Rathenau*, pp. 80-180; *50 Jahre AEG* (Berlin, 1956), 11ff.
43. For the sons, see: Conrad, *Arnold Siemens zum Gedächtnis* (Berlin, 1918); A. Roth, *Wilhelm von Siemens* (Berlin/Leipzig, 1922); Werner to Carl Siemens, 4 November 1884, in Matschoß, *Werner Siemens*, p. 830. For W. Siemens's hope that he would soon be replaced by his sons, 10 May 1886 (SAA BB). For his refusal to hire an outsider, 15 and 22 December 1881 and 6 February 1882 (SAA BB).
44. The successful reform led by Werner Siemens's successor in 1890-1895 seems to support both contentions.
45. A case in point was the previously mentioned conflict between the Berlin and the London Siemens companies in the 1880s. A lack of coordination resulted from the waning personal influences of the Siemens brothers as heads of the branches, especially in London, which led to increased power of employees not determined by brotherly loyalty. Not before new coordination techniques were applied (capital exchange, specified contracts, and finally a central office in Berlin that decided the distribution of market spheres between the branches of the concern), did these frictions disappear.
46. See R. Maass, *Die auswärtigen Geschäftsstellen der Siemens-Werke und ihre Vorgeschichte* (Munich, 1958), pp. 19f. and 31, for the practice of communicating with customers by means of mechanically multiplied forms, and for the time-consuming routine of the mail department.
47. See the recollections of Grabe (SAA 12/Lk 801, p. 9) for a case in point.
48. John T. Broderick, *Forty Years with General Electric* (Albany, NY, 1929), p. 62.
49. For a detailed analysis of this pattern: Kocka, *Unternehmensverwaltung*, 291-97. This combination of a systematic, formalized middle-management structure and informal, traditional leadership techniques is certainly not a peculiarity of German enterprises of the nineteenth century but characterized, and to a certain extent and still characterizes, large-scale organizations in general. There are some indications, however, that this pattern was particularly manifest in the German case: German entrepreneurs early and thoroughly accepted bureaucratic methods for nearly all parts of the industrial enterprise, but they rejected them as long as possible for their own sphere of action at the top. See also H. Hartmann, *Authority and Organization in German Management* (Princeton, NJ, 1959), pp. 51-63, 260ff.
50. In 1897, both AEG and S & H already held capital of 35 million marks.

51. Employment figures according to SAA 29/Le 931, p. 1.
52. Figures according to E. Waller et al., "Studien zur Finanzgeschichte des Hauses Siemens" (SAA 38/8/57), vol. 3, p. 58; vol. 4, pt. 1, p. 83.
53. From 1898 to 1914, S & H, supported by a group of banks under the leadership of the Deutsche Bank, issued bonds amounting to 50 million marks. Total investments used for the expansion of SSW from 1903 to 1918 are estimated at about 510 million marks. A little more than half of this sum was taken from the corporation's retained earnings, the rest from bonds, loans, and credits. See E.L. Jordan, "Die Wirtschaftspolitik des Hauses Siemens" (Ph.D. diss., Königsberg, 1922-1923), p. 28ff.; Waller, "Studien" (SAA 38/8/57), vol. 4, pt. 1, pp. 73ff., 111.
54. Felix Deutsch started to establish such field offices in 1885. See Pinner, *Emil Rathenau*, p. 26ff. Wilhelm Siemens built his first one in 1890, thus starting to replace the previous system based on rather independent commissioners and representatives. The same year Edison General Electric started a similar reorganization, but seems to have given more autonomy to the district managers than in the case of Siemens. See H.C. Passer, "Electrical Manufacturing Around 1900," *Journal Economic History* 12 (1953): 380ff. These parallel developments resulted from the same technological and market characteristics of electrical manufacturing products. See *ibid.*, 392.
55. This office served partly as Wilhelm's staff but also claimed some authority over the unit heads. See the standing rules of the "Zentralstelle," 25 October 1890, and Wilhelm's related comments, 5 November 1894 (SAA 68/Li 65).
56. Compare the standing orders of 1898 and 1903 (SAA 33/Ld 603, I) for the increasing power of Wilhelm Siemens. The former civil servant Tonio Bödiker had been endorsed by the banks and appointed first chairman of the executive board of S & H in 1898. He left this position in 1903.
57. It should be stressed that, contrary to what is usually argued, surviving family traditions can contribute to managerial success even in huge enterprises. In the case of Siemens, they also seem to have served the interests of management in terms of labor policy. In contrast to the AEG management, the Siemens management after 1905 succeeded in reviving and strengthening certain modified paternalistic traditions that helped check the increasing challenge of organized labor. See Kocka, *Unternehmensverwaltung*, pp. 347-63.
58. Forty-seven percent of all 7,176 white-collar salaried employees of SSW (1912) worked in such sales offices. See the autobiographical description of the work in such an office by H. Dominik, *Vom Schraubstock zum Schreibtisch* (Berlin, 1942), p. 55ff. See also Maass, *Die auswärtigen Geschäftstellen*. Departments and offices received voluminous organization manuals that regulated their set-up and operations in detail. See SAA 32/Lb 978 and 32/Ls 109.
59. For the reforms of the Siemens production process, see SAA 11/Lb 733 (instructions of December 1910). A similar system existed in the Berlin-Anhaltische Maschinenbau-AG. See *Technik und Wirtschaft*, vol. 4 (1911), p. 214ff.
60. Kocka, *Unternehmensverwaltung*, pp. 466-513, for a detailed analysis of the status of the Siemens white-collar employees. The best prewar treatment of white-collar employees as a social group is E. Lederer, *Die Privatangestellten in der modernen Wirtschaftsentwicklung* (Tübingen, 1912).
61. See R. Bendix, *Work and Authority* (New York, 1956), pp. 198-253; A.W. Gouldner, *Patterns of Industrial Bureaucracy* (Glencoe, IL, 1954); H.P. Bahrdt, *Industriebürokratie* (Stuttgart, 1958); P.F. Blau, *The Dynamics of Bureaucracy* (Chicago, 1963); M. Crozier, *The Bureaucratic Phenomenon* (Chicago, 1964); H. Bossetzky, "Bürokratische Organisationsformen in Behörden und Industrieverwaltungen," in *Bürokratische Organisation*, ed. R. Mayntz (Cologne/Berlin, 1968), pp. 179-88.
62. Still, changes in top personnel could cause changes in the "formal" distribution of responsibilities. Siemens's power resulted largely from sources (capital property, fam-

- ily traditions) external to the bureaucratic organization. This power enabled him to circumvent the bureaucratic distribution of responsibilities and authority. Many important decision making processes took place through informal channels (correspondence between Wilhelm and bank representatives, social meetings, and informal conferences without records) not at all prescribed by the formal structure.
63. For example, they did not enjoy tenure, but most of them had to fear layoffs in a business recession more than in previous years. Ultimately all these limits of industrial bureaucratization resulted from the market dependence and achievement orientation of the capitalist enterprise in which private property continued to play an important role.
 64. For this first overall standing order (*Geschäftsordnung*) of April 1884, see SAA 33/603, 1. Before that, written standing rules had only referred to the shop and to single departments (first to the technical department in 1872). Krupp already had issued an overall standing order (*Generalregulativ*) in 1872. For that, see E. Schröder, "Alfred Krupps Generalregulativ," *Tradition* 1 (1956): 35-37.
 65. Until then they had been bound together by "collective procura" and regular conferences. Both were abandoned now. See the standing rules from 25 October 1890 in SAA 68/Li 65.
 66. See Wilhelm's notes of 5 December 1906, p. 2 (SAA 4/Lb 832).
 67. For the opposite trend in many American corporations, especially since the mergers of the 1890s, see A.D. Chandler, *Strategy and Structure* (Cambridge, MA, 1962), p. 31ff.; Passer, "Electrical Manufacturing," p. 380ff.
 68. The following figures in brackets refer to the employment level in 1912. Not included are the field sales offices, the loosely affiliated (semi) raw material production units, and the power station. Siemens & Halske: *Wernerwerk* (7,751) for most low-voltage products; *Glühlampenwerk* (3,832) for lightbulbs, etc.; Gebrüder Siemens & Co. (1,498) for carbons, alcohol gauges, heaters; *Blockwerk* (1,018) for railroad measurement devices; *Bahnabteilung* (963) specializing in the construction of the Berlin S-Bahn (subway); Vienna unit (1,510) for low-voltage products. SSW: Charlottenburg plant, including *Dynamowerk* (11,224) and the Nuremberg plant (9,070) for the production of high voltage articles; cable plant (2,868); car plant (649) for a short-lived attempt to build electrical cars; two projection and sales departments (2,801 and 1,224).
 69. See the organization chart of the *Wernerwerk* from 1912 in SAA 33/Ld 393. The *Bahnabteilung* was less developed.
 70. See R.W. Hidy, "The Standard Oil Company (New Jersey)," *Journal of Economic History* 12 (1952): 411-24, esp. 415ff.
 71. For early examples of this organization type see Alfred D Chandler, "The Beginnings of 'Big Business' in American Industry," *Business History Review* 33 (Spring, 1959), pp. 1-31, and *Strategy and Structure*, p. 38ff.
 72. High-voltage projects (like a power plant) were planned, calculated, constructed, installed, sold, and serviced by huge nonproducing white-collar departments (combining technical and commercial staff), which thus intermediated between the plants (each of which, for the most part, produced only portions of each complex project) and the customers. The plants "sold" their products to these projection and sales departments only and did not need any sales department of their own.
 73. For the internal price systems, see SAA 33/Lh 292, 1. For a criticism of resulting centrifugal effects: A. Berliner's exposé, 10 November 1902 (SAA 4/Lk 20), 1, 6, 7, 15. For the similar internal price system of the AEG, see J. Huret, "Die A.E.G.," *Organisation* 10 (1908): 608f.
 74. The pioneering achievement of these two corporations, which introduced this pattern widely used by highly diversified firms up to the present, has frequently been stressed. See A.D. Chandler, "Management Decentralized," *Business History Review* 30 (June, 1956); Chandler, *Strategy and Structure*, pp. 9ff., 42ff., 52-162 for two

- case studies on DuPont and General Motors; Chandler, "The Structure of American Industry in the Twentieth Century," *Business History Review* 43 (Autumn, 1969): 277f.; E. Dale, *The Great Organizers* (New York, 1960), ch. 3.
75. W. Sombart, *Die deutsche Volkswirtschaft im 19. Jahrhundert und im Anfang des 20. Jahrhunderts*, 8th ed. (Darmstadt, 1954), p. 315, early noted the (in many respects) pioneering character of enterprises in the electrical industry.
 76. Westinghouse and General Electric, e.g., did not cover the field of communications equipment and installation, an area of great importance with S & H. See H. Passer, *The Electrical Manufacturers 1875-1900* (Cambridge, MA, 1953), p. 363f.; G. Siemens, *History*, vol. 1, 252-82.
 77. This is what happened in the United States. See J.A. Litterer, "Systematic Management: Design for Organizational Recoupling in American Manufacturing Firms," *Business History Review* 37 (Winter, 1963), pp. 369-371.
 78. For the concepts, see Chandler, *Strategy and Structure*, pp. 7-17; for the development of large systematic structures in American industry since the 1890s, see *ibid.*, pp. 36-41.
 79. See A. Marshall, *Industry and Trade* (London, 1919), p. 129ff.; A.L. Levine, *Industrial Retardation in Britain 1880-1914* (New York, 1967), pp. 57-78.
 80. Before systematic comparisons can be completed, the evidence for this hypothesis remains weak. But consider the rather unsystematic state of affairs at Standard Oil of New Jersey in the 1880s later described in R.W. and M.E. Hidy, *Pioneering in Big Business 1882-1911* (New York, 1955), pp. 68ff., 327ff. *Ex negativo* the criticisms and demands raised in the American management literature since the 1880s seem to point to a rather improvised, unsystematic, sometimes chaotic reality in the enterprises. In contrast, the demands in the German parallel literature were different and had much less response. See J.A. Litterer, "Systematic Management," pp. 461-76; L.H. Jenks, "Early Phases of the Management Movement," *Administrative Science Quarterly* 5(1960): 421-47; for the development of the German management literature since the 1870s see J. Kocka, "Industrielles Management," *Vierteljahrschrift f. Sozial- und Wirtschaftsgeschichte* 61 (1969): 332-72.
 81. Stressing some economic advantages of the bureaucratic conditions of German industrialization, this essay has not considered their possible "social costs." What has favored economic growth may have hampered the liberal democratization of society and state, but this problem cannot be discussed here.

Chapter 3



Managerial Blockade

Siemens and the Preventable Rise of AEG

Translated from the German by Belinda Cooper

In 1880 when industrialist-turned-rentier Emil Rathenau unsuccessfully attempted to convince prominent entrepreneur Werner Siemens to work with him to light the streets of Berlin, the pioneer firm of Siemens & Halske (S & H), founded in 1847, was the undisputed leader of the German electrical industry. Five years previously, S & H had employed fifty percent of all workers in this sector in Germany. Although the telephone business of the late 1870s increased the number of competitors (not yet including AEG), by 1880 none of them came close to S & H in size, available capital, differentiation of production, technical know-how, experience, qualifications, image, contacts, market control, or power.

In 1890 when Werner Siemens, born in 1816, retired from the management of the firm he had founded, Emil Rathenau was managing director of Allgemeine Elektrizitäts-Gesellschaft (AEG), which was superior to Siemens in capital strength, innovative capability, and influence on the newly developed high-voltage electric power market, and soon would be in number of employees. Under new leadership after 1890, S & H did avoid falling farther behind its new rival; by 1914, the firm had even caught up in these areas. But from then on the situation in the German electrical industry would be marked by the existence of two competing,

Notes for this section begin on page 65.

relatively equal, preeminent businesses that far outstripped the many smaller, generally highly specialized, firms that frequently ended up in various forms of heavy dependency.¹

Fritz Redlich recently has demonstrated convincingly how precarious it is, in writing history, to pose the hypothetical question of what would or would not have happened had one or more crucial factors been different than they actually were.² But historians often pose this question, at least in negative terms: What would not have been, or would not have happened, had one or more crucial factors been different? They often ask this unconsciously, and frequently with little chance of an exact answer. This is always the case when the significance of a causal factor for an existing effect is weighed against, for example, the significance of one or more other causal factors.³ The question is even more difficult to discuss in regard to complex social or general historical themes – which deal with a multiplicity of interdependent factors and elements working upon one another in ways difficult to generalize – than it is in works of pure economic history; the latter, guided as they are by economic theories, allow greater abstraction from the rich complexities of historical reality than is otherwise possible for historians.⁴

But historians outside economic history cannot avoid such discussions either, assuming they do not wish to refrain entirely from the study of causal relationships in history. The limits to answering such hypothetical questions in the course of historical research are the very limits within which it is possible for scholarship to ascertain historical causal relationships. These are limits that arise both from the incompleteness of available source material and, independently of this, from the complex, interdependent character of historical processes – a character influenced by human intentions and behavior, not fully determined, and frequently eluding nomological principles.

It is within this horizon of intentions and limitations that the main thesis of the following should be understood: namely, that Rathenau's AEG could not have become an equal competitor of the established Siemens firm, certainly not within ten years, had not internal, historically conditioned (yet not inevitable), structural, organizational, and leadership weaknesses on the part of S & H led it to employ business practices that strongly encouraged the emergence of a rival, to an extent and in a form running counter to the manifest interests and intentions of S & H management.

It was the S & H telegraph manufacturing facility, in Berlin, that built the first dynamo and installed Germany's first electric lighting.⁵ Werner Siemens was the first to take an interest in the use of electric power in

transportation, building the first streetcar in 1881 in Lichterfelde, near Berlin.⁶ S & H also conducted the first successful experiments in the field of power transmission.⁷ Thus the main branches of the high-voltage technology that was powerfully asserting itself in the 1880s, and thus the area that would be more important to Siemens in the 1890s, in terms of revenue and profit, than traditional low-voltage technologies (telegraphy, telephones, gauges, and so forth),⁸ was technologically and scientifically developed and introduced by Siemens.

But Siemens was not the first to enjoy industrial and commercial success with these innovations. Emil Rathenau built Germany's first electric power plant and, in 1884, illuminated an entire city district for the first time (in Berlin), just as he created and supervised the first streetcar company in Germany designed for commercial purposes.⁹ In the area of practical application of power transmission over long distances, too, S & H played only a minor role in the late 1880s.¹⁰ The high-voltage revolution that in the 1880s fundamentally changed the electrical industry and allowed it to expand was not led, in Germany, by the pioneering S & H company, which had promoted and influenced the development of this industry like no other.

It often has been maintained that Werner Siemens failed to develop the electric light in time because he failed to recognize its possibilities.¹¹ However, this is contradicted by the fact that Siemens strove as early as 1870, and even more intensively in the "lighting uproar" around 1880, to develop – in part himself, in part through his chief designer, Hefner-Alteneck – a light that could compete with the dominant French Jablochkoff candle.¹² By 1878, at the latest, Siemens had realized that "the electric light will force significant application, because it is whiter and brighter than the gaslight, because it produces far less heat, and because it is less likely to cause the air in enclosed spaces to go bad."¹³ His optimistic prognosis that he would soon be able to offer a model of a light that would drive all the rest from the field¹⁴ failed to materialize, even after Hefner-Alteneck's invention of the differential arc light.¹⁵

Incandescent lightbulb technology made possible the fuller utilization of the electric light.¹⁶ In 1880 and 1881, S & H ordered incandescent bulbs from an English firm because its own model was still in the developmental stage.¹⁷ Even as Thomas A. Edison's 1879 invention, of which Siemens was at first very skeptical, was becoming known in Europe, and even after it had greatly upstaged the Siemens lights at the Paris electrotechnology exhibition of 1881, Siemens was convinced, as he had been three years earlier, that he himself soon would be able to bring a better incandescent bulb onto the market.¹⁸

Thus it is out of the question that Siemens neglected developing electric lighting because he saw no future in it. But this does not mean

that the firm worked consistently and primarily on a usable light. In fact, especially from mid-1879, other projects took center stage – projects that apparently were more interesting to Siemens but would not be amenable to commercial utilization for a long time: motorized exploitation of high-voltage power for trains, rock drills, and plows. Werner Siemens also increasingly concerned himself with power transmission problems and at times experimented with gas motors.¹⁹ Edison had devoted himself, systematically and with a great investment of people, money, and time, exclusively to the development of the incandescent electric bulb; Rathenau at first did not attempt to achieve anything but electric lighting, although he later bought up a patent for electric rail cars and successfully translated it into industrial, commercial reality.²⁰ Meanwhile, Siemens, while not refusing to use others' patents for business advantage, considered his main goal to be "staying at the forefront of electrotechnology"²¹ through his own efforts. Thus he was involved in many innovations simultaneously, at a time when others had long since specialized.²²

The result was a dissipation of forces, a lack of determination. In 1878, like Edison, Werner Siemens already expected a crucial lighting breakthrough from metal-filament lights.²³ However, his design chief, Hefner-Altenneck, focused more on the ultimately unsuccessful arc light. It remains an open question whether this divergence was approved by Werner Siemens. The fact is that by 1880, Siemens, aging and increasingly overburdened, had lost his decisive impact on his firm's developmental work; that he could no longer control his top managers, especially the designer, whom he described as "stubborn," using the management methods developed for a much smaller business; and that by the late 1870s a disruptive absence of coordination had become perceptible at the top levels of S & H.²⁴ The case of the introduction of lighting demonstrates how little personal control Siemens now exercised over the course of business, and even over new developments. When Rathenau attempted in 1880 to convince him to work with him in tackling the illumination of Berlin's streets on a large scale, the head of the firm did not exactly refuse but, rather, passed him on to Hefner-Altenneck, who rejected the proposal.²⁵

The development of electric lighting not only posed difficult technological problems; it demanded new forms of commercial and organizational behavior from the firm. Siemens was right in his skeptical appraisal in 1878 of the chances of electrical lighting *at the time*.²⁶ Rathenau's achievement consisted precisely in his stimulation of latent desires; in a sense, he created them in order to then use them. In 1880, it was very difficult to obtain capital stock from banks or the public for an untested undertaking like a lighting company.²⁷ In this situation,

Rathenau set up a "study company," the task of which was to promote electric lighting through exhibitions, press notices, and strategically placed model installations. Thus, for example, it succeeded in equipping the Munich Residenztheater with Edison lamps.²⁸

Siemens described these and other new methods of creating desires as a "scandal."²⁹ But it was no longer enough to produce and offer the product, hoping that a possible customer would decide to buy and use it at his or her own risk. The municipal bureaucracies of 1880 (unlike the city bureaucracies of 1840-50) were eliminated as initiators of the new development because city authorities often had close relationships with traditional gas lighting companies and because the projects were quite risky.³⁰ The scale of the new projects, their capital requirements, and their demands in terms of technological, and simultaneously commercial and organizational, expertise made it difficult to carry them out under the umbrella of the producing company itself or under the direction of a particular buyer.

Special organizations connecting producers and buyers seemed to be the answer. Linked closely to the respective producing companies, these organizations nevertheless would allow close cooperation with banks; create and formulate desire for the new installations; conduct negotiations with manufacturers and government officials; direct the building of power plants and installations; combine commercial and technological expertise; and – at least until the new company's profitability was ensured – remain responsible for the operation of the facility. Early on, Siemens recognized the necessity of such marketing departments, or marketing companies ("lighting companies").³¹ He himself had formed a legally and financially independent company of the sort in 1868 to build and market the Indo-European telegraph line.³² But what had been realistic and lucrative in the firm's heyday in 1879 now exceeded its capabilities. "We are not a lighting enterprise, but manufacturers"³³ – this was the attitude with which, until 1883, Siemens completely refused to invest in any lighting companies that might be formed, let alone incorporate one himself, although he realized that such a company was necessary if he wished to market high-voltage products (especially dynamos).³⁴ The first German lighting company was created in 1883 on the American model, and the first city power plant in 1884, both under Emil Rathenau's direction.³⁵

What kept S & H from accepting the organizational and marketing consequences of a technological development that it had, through its own inventions, set in motion? Certainly Werner Siemens had quite pronounced technological and scientific interests and preferred to devote himself to direct experimentation and development work. In contrast, Emil Rathenau behaved so much as a businessman, organizer,

and manager that even people close to him were astonished to hear that he was actually an engineer.³⁶ Werner Siemens was seen by his contemporaries as primarily a technician and scientist, and this image was thoroughly cultivated, in the tradition of the "House of Siemens." Werner's son, Wilhelm, explained the firm's failures between 1880 and 1890 to a historian in this very context: "They did not want to be primarily a manufacturer, but to develop the technological area as such." His father was interested, he said, in the solutions to technological problems but not in their implementation. "A systematizer and organizer, he wasn't made for that."³⁷

This interpretation may have been aimed at a public that paid greater tribute to technological and scientific achievement than to "business" as such. It also corresponded to Werner Siemens's own disdain for the mere businessman.³⁸ But it ignored the fact that in earlier years, despite his strong technological interests, he had never passed up a feasible undertaking and had even seen the shop as a means of gaining hold of the most profitable, renown-bringing enterprises; these had by no means included only manufacture, but also, and especially, installation and operation.³⁹ For Werner Siemens, technology and science had never been antagonistic to entrepreneurship, and his technological and scientific interests were not now responsible for his neglect of entrepreneurial opportunities.

Rather, it was that, under altered technological and market conditions, basic elements of the Siemens enterprise's management strategy and technique, which had been crucial to the firm's early success, now proved a hindrance and a disadvantage. This was especially true of Werner Siemens's family orientation and the personal style of leadership connected with it. Among the most important incentives and goals of his entrepreneurial activity was the "formation of a world-class business à la Fugger ... , which would give not only me, but my descendants, power and respect in the world and the means to raise my siblings and closer relatives into higher regions of life."⁴⁰ The prosperity, advancement, and fame of his family were unquestioned values to him; with them, he attempted to give larger meaning to his strivings and actions, his technological, scientific and entrepreneurial successes.

For its part, the close, traditional cohesiveness of the huge, protestant, *bürgerlich* Siemens family served the early business as an excellent means of solving organizational and managerial problems, especially in coordinating the whole branching international business, which largely rested on the Siemens brothers' sense of family solidarity; in filling top positions; and in developing family-oriented, patriarchal personnel-management methods. In its early years, family-oriented management practices gave

the business an otherwise unattainable basis of loyalty and thus were among the secrets of its success.

However, under the conditions prevailing in the 1880s, these practices acted as an appreciable brake on the economic efficiency of the enterprise, which meanwhile had become a big business. For one, as the business grew, becoming ever less amenable to direct oversight and taking on a life of its own, the effectiveness of these practices decreased. Where Siemens continued to rely on them nevertheless, a relative vacuum of coordination and motivating power emerged at the top. Such practices prevented the timely introduction of new, indirect, impersonal management techniques which would have been available. In filling leading positions, resolving succession problems, and making other business decisions, family considerations continued to take pride of place, even when they were not beneficial to the company's success, expansion, and profits or when non-family-oriented, more economic, alternatives were available.⁴¹

This mechanism came into play around the question of taking over the lighting business and integrating the corresponding departments. Although the eldest Siemens son's lack of aptitude and the second eldest's illness left the leadership of the business on the shoulders of an overburdened Werner Siemens longer than desirable, given both his wishes and the interests of the business, the Siemens family clung to the idea, both natural and central to them, of passing their "empire" to succeeding generations not only as property, but as the object of active leadership.⁴² Given the sons' obvious difficulties in managing the company meant for them, Werner Siemens thought it a mistake to further complicate the business, which was already growing to be too much for him and his supervision and handling. Siemens justified the rejection of an installation and lighting business of his own – and thus of the consistent application, under his own guidance, of high-voltage technology to this most important area – with reference to the necessity of "simplifying our business, which has grown too complicated, and thus making it more workable for our successors."⁴³

Siemens's aversion to the capitalist financial practices that became common in the 1870s was closely linked with this central role of the family principle. At the same time, it was a result of his previously so successful factory-overlord mentality⁴⁴ and of a direct-intervention style of business not limited to financial planning and organizational decision making. Consequentially, he rejected the assistance of banks, without which the extremely capital intensive business of power plants and street lighting was not possible, as well as the process of going on the stock market and submitting to the resulting right of codetermination by outside capital investors. "We simply do not do stock markets, that is, price

speculation.”⁴⁵ The things done by Edison’s representatives and, especially, by Rathenau in Berlin seemed, in the eyes of the 65-year-old entrepreneur, to be unreliable speculations unworthy of him. He frequently called the Edison companies “fraudulent companies,” a “fuss” that would be over in a year.⁴⁶

Werner Siemens rejected cleverness and radically market-oriented business practices that served mainly to maximize profits because he perceived them to threaten his, and his family’s, independence and his traditional factory overlord style. As an entrepreneur, he, too, had aimed at maximum business success; however, he had little sympathy for a period in which tangible factories became mere paper on the stock market, and in which quantity came before quality, exchange value before utility value, large revenue before wide profit margins, and harsh competition before the “humane world view” that he had maintained especially, but not only, when it also promoted his business interests.⁴⁷ He was still oriented toward early industrial practices – the period in which, because official contacts and his monopoly position spared him harsh, unscrupulous, down-to-earth competition, he could still actually ride along on the dangerous cable-laying ships, or endure cold sleigh rides through Russia’s steppes, or struggle in improvised laboratories for entrepreneurial success. Money in itself – once he had accumulated a certain level of wealth – no longer seemed to him a sufficient reason for or worthwhile purpose of his efforts.⁴⁸ Purely financial participation in a deal for the sake of profit, not supplemented by active management, seemed to him a humiliating financial speculation.⁴⁹ “Personal leadership and intelligent labor” meant more to him than profit in itself if they contributed, in complete freedom, to the success of the business and the family’s renown.⁵⁰ When push came to shove, his interest in maximum personal influence and the company’s continuing family character came before profit or expansion.⁵¹

Siemens therefore firmly refused to turn his business into a joint-stock company, in which he could only have functioned as director, because “I do not want to become a servant.”⁵² This distaste for joint-stock companies, the stock market, and stock and bond capitalism, this resistance to letting in large amounts of foreign capital, which the firm, with its excellent reputation, would rapidly have obtained, prevented a complete, independent entry into the lighting and power center business, which would have been too much for the firm’s own capital reserves.⁵³

Emil Rathenau, born in 1838, son of a Jewish businessman and rentier, lacked the specific sense of family that dominated in Werner Siemens, sixteen years his senior, son of the lessee of a Hanoverian estate. Unlike Siemens, he had not pursued an officer’s career but, after attending polytechnic, had held positions as a draftsman and designer. His

manufacturing activities began in the period of unification and crisis; the factory – bought, not built, by him – was transformed into a joint-stock company and liquidated under the influence of the banks. He was influenced by his stay in America, and especially by the possibilities for mass production he had seen there. Lacking the initial advantages, but also without the inhibitions and commitments, of an established factory that was thirty years older and enjoyed first-class contacts with government officials and the court, the unemployed Rathenau was, at the crucial moment, freer and more eager than Siemens to recognize a unique opportunity, grasp it, and doggedly pursue it. By no means lacking in technical know-how, but without technical enthusiasm; with sufficient financial backing but no dominant capital majority share; possessing a commercial, organizational, and financial imagination that could at times approach the fantastic, Rathenau built up a company (one that at first had no manufacturing aspect) under bank supervision in which he was never factory overlord but always managing director. As such, his concept of success differed. Expansion did not threaten, but rather legitimized, him and his power in the eyes of capital interests. Tough and concentrated on his work and less haute bourgeois, cosmopolitan, and dignitary-like than Siemens, he seems to have needed fewer justificatory contexts beyond his factory and his work.⁵⁴

Two mistaken technological decisions by Werner Siemens helped Rathenau's company emerge. Werner Siemens responded with reassurance to William Siemens's early tips, sent from England, on Edison's research, and to his brothers' worried questions whether Edison's incandescent light patent would not stand in the way of their own.⁵⁵ Edison, whom Siemens at first underestimated, and whose public relations efforts he held to be hot air and a waste of time, "won't hurt us," he said. In his view, the difference between Edison's lightbulb model and the one under development by S & H was obvious.⁵⁶ Siemens still felt quite superior in the battle begun by the Edison company and its European subsidiaries.

Not until the end of 1882 did he suddenly begin to acknowledge the superiority of the Edison patents. "If we go forward, after warnings, with the manufacture and installation [of our own lights], we will be exposing ourselves to large compensation claims. If, on the other hand, we stop incandescent lightbulb production until a decision [on cooperation with the Edison group] is made, we will lose all our business in the following year to the Edison company, which will then be firmly in the saddle."⁵⁷ This conviction now became an important incentive leading Siemens to enter into an agreement with the American company and with Rathenau, who in 1881 had already obtained the contractual right to the

Edison patents in Germany; without him, no agreement was possible between the Edison group and Siemens, especially as Rathenau had meanwhile succeeded in securing the support of a consortium of banks.⁵⁸

When, through the mediation of the director of Deutsche Bank, Georg Siemens, the Edison consortium approached S & H with proposals for an agreement,⁵⁹ Werner Siemens acted quickly, agreeing not to challenge the Edison patents and gaining the right to copy them for a patent premium. Further, S & H agreed to a sort of division of labor: the German Edison company, under Rathenau, would build and install all power plants and lighting facilities; S & H would contractually surrender all its orders and concessions to Rathenau's company; and Rathenau agreed to market all machines, apparatus, and materials, except for incandescent bulbs, made by S & H at the most favorable prices possible.⁶⁰ This contractually secured division of labor, in which the Edison company functioned more or less as a large lighting and sales company for Siemens products, accommodated Werner Siemens's interests to an extent;⁶¹ but the new arrangement was hardly a successful conclusion to his earlier efforts to establish contact with independent lighting companies as sales and installation agents. Instead, Edison's apparently superior patent had caused Siemens to abandon his distaste for the new "fraudulent companies" and led him into an alliance that forced him – in contrast to his earlier wishes – to refrain from *any* sort of involvement in the power plant and lighting business. Although Siemens did not predict the absolute, paramount significance that this branch of high-voltage technology would gain over the next two decades, he in no way considered the association he had entered into to be ideal.⁶²

However, even the limited advantages for S & H contained in the contract vanished when it became clear that Edison's patent was in no way unassailable, as his representatives maintained and Werner Siemens had believed. Despite his brother William's doubts,⁶³ Werner Siemens had vouched for the invincibility of the Edison patents, noting that he was "probably the most expert in German patent issues."⁶⁴ However, Wilhelm's fears proved well founded. Edison's patents did not prevent the emergence of heavy competition by rivals who produced incandescent bulbs and built lighting facilities, while Siemens and Rathenau tied each other's hands under a contract concluded on the assumption that Siemens and Edison would enjoy a monopoly in this area.⁶⁵ In revising his original underestimation of Edison's patents, Siemens, who had probably made the decision independently, confident of his own personal knowledge of patent relationships and unable to fall back on a special patent department,⁶⁶ committed a serious overestimation. It cannot be proven, but may be assumed, that this mistake could not have

occurred under management that systematically collected information, catalogued it in a technical archive, and made decisions through a coordinated division of labor. But it was understandable in an overburdened individual whose written reports on the Edison company often degenerated into complaints about the fuss of organizationally unedifying business conditions.⁶⁷

These changed conditions and other sources of conflict radically worsened the relationship between Siemens and the German Edison company.⁶⁸ Siemens once again took up the fight.⁶⁹ He had now changed his opinion on the possibility of taking an active part in lighting companies, in the face of developments that had favored other, more courageous companies.⁷⁰ In order to avoid falling behind the others, Siemens was now ready (1886), after Rathenau had built the first electric power plant in Berlin,⁷¹ to build and operate such centers himself.⁷² The same year, when Rathenau's first, risky lighting plant, *Städtische Elektrizitätswerke*, created under a city concession as an independent entity heavily influenced by the German Edison company, drove him to the brink of bankruptcy as a result of urgent demands by the city government and simultaneous stockholder distrust,⁷³ S & H seems to have consciously contributed to the crisis.⁷⁴ Siemens planned to take over the *Städtische Elektrizitätswerke* eventually, and he negotiated with Deutsche Bank and Delbrück, the banker, on creating the company necessary for this.⁷⁵ In stark contrast to his earlier plans, he now attempted to take over the role of Rathenau's company, that is, to absorb it: "We would then be Edison, and the Edison company here would be us...."⁷⁶

The maneuver failed, however. Rathenau abruptly bought the shares of the *Elektrizitätswerke* and administered it himself as the *Berliner Elektrizitätswerke AG*. However, he could afford this surprise attack only because he had succeeded in gaining the support of several banks, and especially the help of Georg Siemens (Deutsche Bank), who now worked to secure cooperation between Rathenau and Siemens.⁷⁷ Georg convinced Werner Siemens that S & H, as a partnership, no longer had the power to completely supplant Rathenau's company. A second contract was concluded (1887): S & H helped the German Edison company, now called *Allgemeine Elektrizitätsgesellschaft (AEG)*, to free itself from dependence on the Edison concern through a buyout.⁷⁸ Siemens now participated in financing AEG and placed his son Arnold on the supervisory board of the new company. The previous division of labor was relaxed but not abandoned.⁷⁹

It seems that, here again, Werner Siemens missed a chance to prevent the emergence of his major competitor. Rathenau had been saved by the capital support of the banks, especially of Georg Siemens.⁸⁰ Had Werner succeeded in gaining the support of Deutsche Bank for his own business

– as his company would in 1897, when S & H, with the support of Deutsche Bank (which thus gained a degree of influence over Siemens), turned itself into a joint-stock company – this probably could still have prevented the emergence of AEG. But it was precisely such an association with Deutsche Bank or any other bank that Werner Siemens refused to enter; he could not do so without placing in question the character of the family business. The capital necessary for the impending undertakings in the lighting and rail sectors, and especially for the international projects planned by Deutsche Bank in this area, could not be raised by a family business.⁸¹ Georg Siemens, director of Deutsche Bank, cousin and former partner of Werner Siemens, caught between Siemens and Rathenau, later said his “business interests lay with AEG, while my sentiments drew me more to the side of Siemens & Halske.”⁸² His business interests *had* to be devoted to AEG as long as the structure of the S & H family business resisted the strong influence of significant bank investment.⁸³

The contract of 1887 held the seeds of early conflicts in the areas that it tried to regulate, and, in the things it left out, it held the seeds of AEG’s emancipation from connections to Siemens. The measure of independence was enough for AEG – with production underway and with rapidly growing capital strength (at first financed by bank capital and later self-financed, under risk- and innovation-friendly leadership) – to achieve a leading position in new areas, such as electric streetcars, power transmission, and electrochemicals, that were ignored by the contract with S & H.⁸⁴ After extreme tensions,⁸⁵ an 1894 contract gave both companies complete freedom.⁸⁶

The high-voltage revolution and the rise of AEG hit S & H during what was probably its weakest decade, between the founding of the Empire and the First World War. In the 1880s, the company suffered setbacks not only in the new area of high-voltage technology, which gave outsiders great opportunities, but even in its older domain, low-voltage technology.⁸⁷ Management practices that had promoted the firm’s development in an earlier phase now became something of an obstacle. As demonstrated in the lack of coordination and his mistaken decisions in the area of technological development, the old factory overlord could no longer practice the tight, dynamic, imperious leadership that he had preferred until the mid-1870s in a growing business, under increasingly complicating technological and market conditions. Yet the structure of the firm was geared toward such tight, dynamic, imperious, centralized and personalized leadership. Organizational alternatives (such as collegial leadership; staff departments; systematized informa-

tion collection; specialized, labor-divided development and patent departments; decentralization; replacement of the personalized factory boss regime with indirect, detached, systematic leadership techniques) were not developed until the retirement of the founder, who had stood in the way of such modernization (but could not, in the end, manage without it) – that is, not until after 1890.⁸⁸ Then, they were so successful that Siemens was probably the first concern to develop the organizational pattern of the highly diversified, decentralized, multidivisional enterprise, which has become internationally typical of large industrial companies since the 1920s.⁸⁹ Organizational shortcomings, combined in the 1880s with the family orientation of Siemens's management, were responsible for S & H's years of failure to develop additionally complicating organizational forms; without these, however, an independent entry into the lighting and power plant business was not possible. This family orientation and an early-industrial distance from capitalist financial practices led Siemens to take a distinctly defensive posture in regard to banks, without which the new high-voltage projects could not be financed.

For Rathenau, free of all these traditional bonds and inhibitions, Siemens's weakness represented his big chance. It certainly cannot be maintained that Siemens's developmental efforts could, with better coordination, have brought an incandescent bulb of his own onto the market in time. But a more realistic assessment of Edison's patents – resulting either in their early purchase by S & H itself, or in its pursuit of competition and patent conflict even in 1883 with the aim of producing an equally good or better model of its own – would have been likely in a less chaotic system of leadership. After all, in 1880, with its large, qualified staff, the firm had at its disposal a level of electrotechnical know-how unparalleled in Germany; it needed only to be deployed effectively.

Even without better development work or a patent department, S & H could have stopped the rise of Rathenau's company (which Werner Siemens would have been happy to do, once he had become convinced of the seriousness of the competition from Edison and Rathenau, as we have demonstrated) if the firm had been willing – as it was after 1890 under Wilhelm von Siemens's leadership – despite tradition and its family orientation, to make the necessary organizational reforms and enter into cooperation with banking houses. The advantage enjoyed by S & H over all actual and possible competitors in terms of capital, expertise and experience, staff and customer relations, power, and prestige at the beginning of the high-voltage age would have made the company exceptionally lucrative to any financial partner. This, along with its excellent relations – sealed by family connections – with Deutsche Bank and its group, and to Georg von Siemens, whose

monopolist goal stood in the way of the emergence of a bipolar power constellation in the electrical industry, would, in my opinion, have sufficed by 1887 to prevent the rise of a competitor of equal status, if – through a changed willingness to expand and innovate, a modification of traditional methods and sentiments, and a less stubborn preservation of its own independence – the company had taken advantage of the available opportunities, as it did after 1890 in face of an ever more threatening, aggressive rival who by then could no longer be eliminated.

This does not mean that Siemens could have prevented the appearance of small or medium-size competitors; their number grew, but without significant losses for the two giants. This also does not mean that Siemens could have kept his personal dominance in the electrical industry. The scientific, technological, and financial, aspects of the unfolding expansion and complication of this industry brought with it the need for new men and new centers of power. In particular, we cannot, of course, say how the energetic and talented Rathenau would have behaved in the face of different business conduct on S & H's part. Perhaps – as his offer to Siemens in 1880 seemed to signal – he would have become managing director of an electrotrust headed by the Siemens group and funded by banks, as imagined by Georg von Siemens and later also by Rathenau himself (although now under his own leadership).⁹⁰ The argument here is simply that feasible and, in principle, available alternative behavior on Siemens' part in the 1880s could have prevented the emergence of AEG as an independent, increasingly equal partner, and that S & H's weaknesses were a necessary, and in the existing situation, it seems to us, indispensable, condition of AEG's rise to the extent and in the way we know it. We cannot know, and probably should not ask, how the development of the German (and increasingly internationally interlinked) industry, of the Siemens company itself, and of the German economy in general – both its growth and its sociopolitical aspects – would have turned out without Siemens' weakness and its consequences, culminating in the emergence of AEG.

Notes

1. In 1875, S & H employed 571 of the 1,157 persons working in the German electrical industry; in 1895, it employed only 4,071 of 26,321. In 1900, Siemens employed 16,350 people (including employees abroad), AEG 17,300; in 1912, Siemens employed 75,000, AEG 61,000 people. See H. Gutenberg, "Die Aktiengesellschaften in der Elektrizitätsindustrie" (Ph.D. diss., Berlin, 1912), p. 2; *50 Jahre AEG*, privately published manuscript (Berlin, 1956), pp. 148, 184; J. Kocka, *Unternehmensverwaltung und Angestelltenschaft am Beispiel Siemens 1847 bis 1914: Zum Verhältnis von Kapitalismus und Bürokratie in der deutschen Industrialisierung* (Stuttgart, 1969), p. 563. AEG had at its disposal share capital of 16 million marks in 1889 and 20 million marks in 1891, while in 1890 S & H was turned into a limited partnership with liable capital of only 14 million marks. In 1897, each had capital of 35 million marks. See F. Pinner, *Emil Rathenau und das elektrische Zeitalter* (Leipzig, 1918), p. 219f.; E. Waller et al., "Studien zur Finanzgeschichte des Hauses Siemens" (unpub. ms. in Werner von Siemens Institute, Munich), vol. 3, p. 121; in addition to these works, on the history of the two companies, see G. Siemens, *Geschichte des Hauses Siemens*, 3 vol. (Munich, 1947-1952) (2nd ed.: *Der Weg der Elektrotechnik. Geschichte des Hauses Siemens*, 2 vol. [Freiburg/Munich, 1961]); K. Helfferich, *Georg von Siemens: Ein Lebensbild aus Deutschlands großer Zeit*, vol. 2 (Berlin, 1923), pp. 38-158.
2. See, above all, his debate with the "counterfactualists" among the "New Economic Historians": F. Redlich, "Potentialities and Pitfalls in Economic History," in *Explorations in Entrepreneurial History*, 2nd series, vol. 6 (1968), pp. 93-108 (cited in Redlich, *Steeped in Two Cultures: A Selection of Essays* [New York, 1971], pp. 356-74, esp. pp. 364-72).
3. See the convincing justification of this thought experiment in M. Weber, "Kritische Studien auf dem Gebiet der wissenschaftlichen Logik" (1906), in M. Weber, *Aufsätze zur Wissenschaftslehre*, 3rd ed. (Tübingen, 1968), pp. 215-90, esp. 286-87.
4. On this, see J. Kocka, "Theorieprobleme der Wirtschafts- und Sozialgeschichte," in *Geschichte und Soziologie*, ed. H.-U. Wehler (Cologne/Berlin, 1972).
5. See W. Siemens to consul H.H. Meyer, 8 September 1885, in *Werner Siemens: Ein kurzgefasstes Lebensbild nebst einer Auswahl seiner Briefe: Anlässlich d. 100. Wiederkehr seines Geburtstages*, ed. C. Matschoß, 2 half-vols. (Berlin, 1916) (hereafter Matschoß, *Briefe*), p. 856f.
6. See, Werner to Carl Siemens, 12 June 1879, in Matschoß, *Briefe*, p. 619f.; G. Siemens, *Geschichte*, vol. 1, p. 128f.
7. See Matschoß, *Briefe*, Introduction, p. 10ff.
8. In 1890, low-voltage products realized sales of 4.8 million marks; high-voltage products, 5.2 million marks; cable, 6.5 million marks. In 1895, the figures were 4.7 million, 17.9 million, and 8.4 million. See Waller et al., "Studien," vol. 3, p. 58. At AEG, the low-voltage aspect played almost no role in 1890 and 1895.
9. See *50 Jahre AEG*, p. 46 ff.; Helfferich, *Georg von Siemens*, vol. 2, p. 88f.
10. See A. Riedler, *Emil Rathenau und das Werden der Großwirtschaft* (Berlin, 1916), p. 68ff.
11. See the article "AEG," *Plutus: Kritische Wochenschrift für Volkswirtschaft und Finanzwesen* 5 (1908): 334-36, esp. 336; Pinner, *Emil Rathenau*, p. 71ff.; and suggested in Helfferich, *Georg von Siemens*, vol. 2, p. 48; *50 Jahre AEG*, p. 20f.
12. On the principle of this light, see G. Siemens, *Geschichte*, vol. 1, p. 124f. On Siemens' plans, see his letters to director A.L. Flory on 5 December 1877, to his brother Wilhelm on 5 November 1878, to v. Kunwald on 23 November 1878, and to Carl Siemens on 28 December 1878, in Matschoß, *Briefe*, pp. 548f., 582, 587, 593ff. In November 1878, Siemens spoke of a "truly terrible electric lighting uproar" and of a raging "invention hunt" for lights. See *ibid.*, pp. 586, 590.

13. See W. Siemens to F.W. Klüppelberg, 30 December 1878, in *ibid.*, p. 596. In assessing his skeptical position on the *existing* state of the electric light on 4 October 1878 (*ibid.*, p. 577f.), it must be considered that, two months previously, he already had sought opportunities to spread to the United States with lights and current machines (see W. Siemens to his brother William, 5 August 1878, in *ibid.*, p. 572ff.). Similarly, see his letters on 13 May 1877 and 2 November 1878 in *ibid.*, pp. 523, 580f. However, he did not believe that electric lighting would ever completely replace gaslight.
14. For example, in a letter to his brother William, 24 February 1879, in *ibid.*, p. 607.
15. See W. Siemens to his brother Carl on 9 April and 29 April 1879, to his brother Friedrich on 23 May 1879, and to Carl on 12 June 1879, in *ibid.*, pp. 615f., 618, 618f., 619f.
16. On the technical development and superiority of the incandescent light, see H.C. Passer, *The Electrical Manufacturers 1875-1900: A Study in Competition, Entrepreneurship, Technical Change and Economic Growth* (Cambridge, MA, 1953), p. 75ff.
17. See Werner to Carl Siemens, 5 April 1880, in Matschoß, *Briefe*, p. 660.
18. See Werner to Carl Siemens on 19 October 1881 in *ibid.*, p. 704f., and to William Siemens on 30 November 1881 in *ibid.*, p. 710f. See also William to Werner Siemens on 7 December and 10 December 1880, in Siemens Archive Akte, Werner von Siemens Institute, Munich, Briefsammlung (letters collection) (hereafter SAA BB).
19. See Werner to Carl Siemens, 12 June 1879, in Matschoß, *Briefe*, p. 620. William criticized the fact that Werner had busied himself too much with "schemes," to the detriment of light development. Werner admitted this. See William to Werner Siemens on 2 December 1880 and Werner to William Siemens on 7 December 1880 (SAA BB).
20. See Helfferich, *Georg von Siemens*, vol. 2, p. 88f.
21. See Werner to Carl Siemens on 6 February 1882 (SAA BB).
22. This was too much, as Werner Siemens himself suggested; see his letter to Carl Siemens on 6 February 1882 (SAA BB).
23. See Werner to William Siemens on 9 December 1878, in Matschoß, *Briefe*, p. 592.
24. Listed in detail in Kocka, *Unternehmensverwaltung*, pp. 233-93.
25. See Pinner, *Emil Rathenau*, p. 81f. However, we cannot check this information against Siemens material.
26. See note 13 above.
27. See Helfferich, *Georg von Siemens*, vol. 2, p. 51.
28. See *50 Jahre AEG*, p. 32ff.
29. See Werner to Carl Siemens on 3 October 1882 (SAA BB): The Edison company "is making a lot of trouble for us now. They are making an immense scandal with their Munich affairs! Can't you get a theater illuminated there? That's mainly where the people tackle it!"
30. See Waller et al., "Studien," vol. 3, p. 15ff. On the role of bureaucracy in putting low-voltage technology to practical use, see Kocka, *Unternehmensverwaltung*, p. 48ff.
31. See Werner to William Siemens on 5 August 1878, in Matschoß, *Briefe*, p. 573f.
32. See W. Siemens, *Lebenserinnerungen*, 17th ed. (Munich, 1966), pp. 174-268; G. Siemens, *Geschichte*, vol. 1, pp. 73-85.
33. See Werner to Carl Siemens on 28 December 1878, and to Miquel, at the time the lord mayor of Frankfurt, on 15 September 1885, in Matschoß, *Briefe*, pp. 595, 858.
34. See Werner Siemens to Dr. Krieger on 4 October 1878 and to William on 17 March 1879, in *ibid.*, pp. 577f., 611.
35. See Pinner, *Emil Rathenau*, pp. 97ff., 129ff.
36. See *ibid.*, p. 365.
37. Thus Wilhelm von Siemens to Richard Ehrenberg on 25 June 1915 (Siemens Archive file [SAA] 4/Lc 600). On the overall problem, see also S. von Weiher, "Tra-

- ditionspflege im Hause Siemens im Spiegel der Geschichte seines Archivs," *Tradition 2* (1957): 222-28.
38. See W. Siemens, *Lebenserinnerungen*, p. 29.
 39. See Werner to William Siemens on 13 May 1863, in Matschoß, *Briefe*, p. 210: "We have always sought, with apparatus construction and technically in general, to stay at the top, in order to get hold of businesses with which we could earn money. If that ends, it would be necessary to close our production as well." Similarly to Carl on 20 May 1863 (SAA BB). Many examples in R. Ehrenberg, *Die Unternehmungen der Brüder Siemens*, vol. 1 (until 1870) (Jena, 1906).
 40. Werner to Carl Siemens on 25 December 1887, in Matschoß, *Briefe*, p. 911. Similarly on 4 November 1863, *ibid.*, p. 218; see also W. Siemens, *Lebenserinnerungen*, pp. 12, 30, 34; and to son Wilhelm on 3 February 1877, in *Aus einem reichen Leben: Werner von Siemens in Briefen an seine Familie und an seine Freunde*, ed. F. Heintzenberg (Stuttgart, 1953), p. 287f.
 41. Details and evidence in Kocka, *Unternehmensverwaltung*, pp. 80f., 233, 242, 252-54; summary and general context in chapter 2 of the present vol.
 42. See Carl to Werner Siemens on 24 March 1880 (SAA BB): "The most natural thing would have been if you put the Berlin den [S & H Berlin] in order for your boys and I did the same for the [Saint] Petersburg one [subsidiary] for mine."
 43. Thus to Wilhelm Siemens on 16 March 1883, in Matschoß, *Briefe*, p. 774; to Carl on 25 December 1887, in *ibid.*, p. 911: "I see the business only secondarily as a matter of monetary value; for me, it is more like an empire that I have founded and which I would like to pass on to my descendants undiminished, in order to continue creating in it." In 1881, Siemens already hoped to escape the commercial "fuss that now often becomes too much for me" in his newly purchased villa in Harzburg (to Wilhelm Siemens on 30 November 1881, SAA BB). These complaints about the fuss, overextension, complication and confusion of the business are typical of his private letters during the last ten years of his leadership.
 44. If we distinguish, with Schumpeter, between the ideal types of founders, factory overlords, captains of industry, and directors, Siemens corresponded to the type of the factory overlord. See J. Schumpeter, "Unternehmer," in *Handwörterbuch des Staatswissenschaften*, 4th ed. (Jena, 1928), vol. 8, p. 484.
 45. See Werner to Carl Siemens on 22 April 1882 (SAA BB).
 46. More or less thusly to Carl Siemens on 27 March 1882 (SAA BB) and on 22 April 1882, in Matschoß, *Briefe*, p. 727.
 47. See W. Siemens, *Lebenserinnerungen*, p. 295ff.
 48. See note 43 above (to Carl Siemens, on 25 December 1887).
 49. "One must have a real, not exclusively financial interest in his business if it is to satisfy him." Werner Siemens to Wilhelm on 16 April 1863, in Matschoß, *Briefe*, p. 207.
 50. See Werner Siemens to L. Loeffler on 22 December 1884: He hoped that he would soon be able to pass the entire leadership to his sons. "Thus the Berlin business must everywhere have in mind more the future than present profit." Quoted in S. von Weiher, "Die Entwicklung der englischen Siemens-Werke und des Siemens-Überseegeschäftes in der zweiten Hälfte des 19. Jahrhunderts" (Ph.D. diss., Freiburg im Br., 1959), p. 161.
 51. See Werner to Carl Siemens on 25 December 1884, in Matschoß, *Briefe*, p. 637.
 52. See Ehrenberg, *Die Unternehmungen*, p. 455, and August Roth, *Wilhelm von Siemens: Ein Lebensbild* (Berlin/Leipzig, 1922), pp. 78, 113, 115.
 53. Lack of capital also was mentioned by Siemens employee Lent, who conducted the first negotiations with Rathenau, as a reason for Werner Siemens's inclination to settle with the German Edison company (Lent's exposé from 1908, SAA 4/Lb 907).

54. See Pinner, *Emil Rathenau*, pp. 4ff., 199, 260, 354-95; *50 Jahre AEG*, p. 11ff.; see also the assessment of Emil Rathenau by Werner Siemens's successor and son, in Kocka, *Unternehmensverwaltung*, pp. 332-34.
55. See Wilhelm to Werner Siemens on 2 December 1880 (SAA BB) and the reply on 7 December 1880 (Matschoß, *Briefe*, p. 679).
56. See Werner Siemens to Carl on 26 May 1882, in *ibid.*, p. 733. On Edison's sales methods, see Passer, *The Electrical Manufacturers*, p. 105ff.
57. Thus Werner Siemens to William on 27 October 1882 (SAA BB). See also Werner to Wilhelm on 6 December 1882, in Matschoß, *Briefe*, p. 751.
58. It consisted of the Jacob Landau banking house, the National Bank for Germany [Nationalbank für Deutschland], the Breslau Diskontenbank and Gebr. Sulzbach, Frankfurt. See Pinner, *Emil Rathenau*, p. 92ff.
59. See the letter from Georg to his cousin Werner Siemens on 28 October 1882, in Helfferich, *Georg von Siemens*, vol. 2, p. 52.
60. See the clear summary of the contract's contents in *ibid.*, vol. 2, p. 54ff. The contract is partially reprinted in Pinner, *Emil Rathenau*, p. 109ff.
61. See Werner Siemens to William on 7 July 1883, in Matschoß, *Briefe*, p. 796f.
62. When he first heard the suggestions for agreement from the Edison group or Georg Siemens, he wrote, "It is worth hearing, but also raises great misgivings. It is impossible for us to transfer all our customers – among them the Kaiser himself – to the Edison company ..." (Werner to William Siemens on 27 October 1882 [SAA BB]). That is exactly what happened, however.
63. See William to Werner Siemens on 5 March 1882 (SAA BB).
64. See Werner to William Siemens on 8 March 1883, in Matschoß, *Briefe*, p. 771. William Siemens, who had expressed the suspicion that the contract was to serve primarily to achieve greater (monopoly) profit – "but won't that simply set new competition in motion?" (William on 5 March 1883, SAA BB) – agreed to the contract only reluctantly.
65. See Pinner, *Emil Rathenau*, p. 123ff; Helfferich, *Georg von Siemens*, vol. 2, p. 71ff.; *50 Jahre AEG*, p. 65 ff.
66. The company regulations of 31 January 1881 that applied at the time in the technical department of S & H merely determined that the technically qualified sales director, in addition to all his other duties (which included technical correspondence), was to supervise patent matters (SAA 33/Ld 603, I).
67. On these complaints of Werner Siemens's, see Kocka, *Unternehmensverwaltung*, p. 243ff.
68. On the individual points of conflict, see the literature cited in note 65 above and G. Siemens, *Geschichte*, vol. 1, p. 142ff.
69. See Werner Siemens to Carl on 10 May 1886: "We must now see to it that we manage *against* the Edison company" (SAA BB).
70. In 1883, he had still rejected a proposal by Edison's representative that he participate in a Siemens/Edison lighting company, to be created. See Werner Siemens to his son Wilhelm on 28 September 1883, in Matschoß, *Briefe*, p. 802. But by 1886, the firm in Russia had already decided to create a lighting company. See G. Siemens, *Geschichte*, vol. 1, p. 157.
71. See C. Matschoß, *50 Jahre Berliner Elektrizitätswerke 1884-1934* (Berlin, 1934).
72. See Werner Siemens to Carl Siemens on 24 June 1886, in Matschoß, *Briefe*, p. 884.
73. See Pinner, *Emil Rathenau*, p. 140; Helfferich, *Georg von Siemens*, vol. 2, p. 69f.; *50 Jahre AEG*, p. 70f.
74. See Werner to Carl Siemens on 10 May 1886: "In the meantime, we have gotten the city of Berlin to take charge of electric lighting and have designed projects for this" (SAA BB). Werner wrote to Carl Siemens on 11 May 1886 (SAA BB): "The Edison company is thus put out of business. It is impossible to come to agreement with

- those people." See the intimation in G. Siemens, *Geschichte*, vol. 1, p. 148f.; however, here the crisis is incorrectly attributed to the year 1888.
75. See Werner to Carl Siemens on 29 October 1886 (SAA BB).
 76. See Werner to Carl Siemens on 5 December 1886 (SAA BB).
 77. See Helfferich, *Georg von Siemens*, vol. 2, p. 72ff.
 78. See G. Siemens, *Geschichte*, vol. 1, p. 147.
 79. AEG had to buy the machines and cables for all equipment exceeding 100 horsepower from S & H, while S & H had to leave to AEG, at its request, any construction that was offered to S & H. Otherwise, both partners were free, and Rathenau immediately began the production that he had already prepared but that previously had been forbidden him. See Pinner, *Emil Rathenau*, p. 150ff., where the contract is partially reprinted; see also G. Siemens, *Geschichte*, vol. 1, p. 148.
 80. See Helfferich, *Georg von Siemens*, vol. 2, p. 70ff.
 81. In the late 1880s, S & H found itself in a somewhat strained financial situation. See Werner to Carl Siemens on 14 January 1889 (SAA BB). In 1891, its bank credit already came to 8.5 million marks, and in 1894 the firm issued bonds totalling 10 million marks. See Waller et al., "Studien," vol. 3, p. 123f.
 82. See Helfferich, *Georg von Siemens*, vol. 2, p. 123.
 83. Comparing the development of S & H and AEG in the 1880s and early 1890s, Wilhelm von Siemens wrote to Ehrenberg on 8 January 1917 (SAA 4/Lc 600): "However, we had it much harder, since we had our old, cramped factories and we made the mistake, if you will, of placing a powerful source of bank funds like the Deutsche Bank at the disposal of AEG, which was thus simultaneously taken away from us." See also Helfferich, *Georg von Siemens*, vol. 2, p. 95.
 84. See the summary of the contract in Helfferich, *Georg von Siemens*, vol. 2, p. 86ff.; *50 Jahre AEG*, p. 74ff., and Pinner, *Emil Rathenau*, p. 175ff.
 85. AEG did not show the expected interest in building large headquarters that, under the agreement, would have brought S & H significant production contracts, because it was bound to the competitors; on the other hand, S & H tended not to pass on to AEG concessions offered to it, but instead to reach agreement directly with the municipal governments. Tension, enmity, and lawsuits followed; many contracts went to third rivals, such as Schuckert. See Pinner, *Emil Rathenau*, p. 179ff.; G. Siemens, *Geschichte*, vol. 1, p. 227ff.
 86. See Helfferich, *Georg von Siemens*, vol. 2, p. 124; *50 Jahre AEG*, p. 116f.; G. Siemens, *Geschichte*, vol. 1, p. 228.
 87. See the recollections of Grabe (SAA 12/Lk 801, p. 13), an employee of S & H who began working there in 1889 and unfavorably compared S & H's Berlin shop with local competitors, such as the Stock and Pätisch-Zwietusch companies. For confirmation, see G. Siemens, *Geschichte*, vol. 1, p. 202f.
 88. Wilhelm von Siemens, who stepped in as successor in 1890, later wrote to R. Ehrenberg in hindsight about this year that it was "high time to carry out a complete commercial reorganization, I'd like to say, across the board ... in the areas of organization, financial administration, production [and] external intercourse" (on 25 June 1915, SAA 4/Lc 600).
 89. Cf. chapter 2, p. 40-42 above.
 90. See Helfferich, *Georg von Siemens*, vol. 2, p. 117; on Rathenau's quest for monopoly-like control of the electricity market after 1900 and the early efforts at creating an "electro-union" between Siemens and AEG until 1914, see Kocka, *Unternehmensverwaltung*, pp. 327-34, esp. 332-34; see also V.I. Lenin, "Der Imperialismus," in his *Ausgewählte Werke in drei Bänden* (Berlin, 1963), vol. 1, p. 820f.

Chapter 4



Entrepreneurship in a Latecomer Country

The German Case

A Conceptual Framework

How did the social structure, the dominant traditions, attitudes, and values influence the development, the structure, and the functions of entrepreneurship¹ in industrializing countries? To what extent, through what mechanisms, and with what results did social and cultural factors influence the availability and quality of industrial entrepreneurs and managers, their attitudes and behavior, their performance in the enterprises, and their contributions to economic growth and development?² Most scholars agree that such influences and relations exist. But there is no agreement on just how important they are for explaining and understanding economic development and change; there is no agreement at all about the best way to study them; and at least in the case of Germany, there is not much systematic knowledge about their character and working.³ It seems difficult to discuss these problems without a conceptual framework that permits us to select relevant aspects and that provides hypotheses about the social and cultural determinants of entrepreneurship in the process of industrialization.⁴ In this essay I try to use some aspects and implications of the theory of “relative economic backwardness” or “late development” as proposed by Alexander Gerschenkron and others⁵ in order to select and structure some information on the social and cultural conditions of German industrial entrepreneurship in the

Notes for this section begin on page 95.

nineteenth and early twentieth centuries. In several regards this theory seems to be more useful than others for such a discussion:

(1.) It offers or implies several propositions and hypotheses on the availability, recruitment, perceptions, preferences, attitudes, values, ideologies, behavior, and performance of entrepreneurs (and the structure of enterprise and its management) in latecomer countries (like Germany) in comparison to those in early industrializers (especially Great Britain). Thus the validity of this theory can (and should) be tested with data from the history of entrepreneurship, while at the same time it may be instrumental for selecting, structuring, and explaining information on the development of entrepreneurship in different societies. Six propositions of the relative-backwardness approach are particularly useful for supplying questions, viewpoints, and hypotheses to be applied to and tested by research in entrepreneurial and business history:

(a) In a relatively backward (latecomer) country, there is less continuity in the development from the pre-industrial to the industrial period; there is a sharper break and a bigger leap than in the "first industrial nation." Here, the developing factory system could build on previous industrial and commercial traditions much more than the factory system in late-developing countries. A higher degree of discontinuity in the backward country should be reflected in the recruitment, the social origins, the occupational background, and the regional mobility of its early entrepreneurs. They should be *homines novi* in latecomer countries to a larger extent than in early-industrializing countries.

(b) As the difference between the status quo and the requirements of industrialization, in other words, as the necessary effort to industrialize and the obstacles against it, were greater in the backward country, particular ideologies and collective emotions were necessary to start the "Great Spurt" and to get the process underway. Profit-orientation and the belief in laissez-faire principles are supposed to be insufficient stimuli for entrepreneurs in a backward situation; other motives, visions, and goals of a less individualistic brand must supplement the more individualistic, sober, and primarily economic goals that sufficed to motivate British entrepreneurs. Gerschenkron identifies *Saint-Simonism* (France), nationalism (Germany), and orthodox Marxism (Russia) as ideologies of industrialization in latecomer countries; this hypothesis should be checked by a detailed analysis of the motives, values, and perspectives of entrepreneurs.

(c) One of the reasons why the development in latecomer countries differs from the development of the early industrializers lies in the fact that the pioneer serves as a model or as a deterring example for the latecomer. The backward country often successfully tries to imitate (or import) the technological and organizational resources that have been

developed slowly and step by step by the pioneer; thus the backward country partly leaps at once into a relatively advanced state of development. It may also try to avoid certain mistakes that the pioneer made.⁶ This central hypothesis must be tested by exploring whether/how the decision makers and actors – and that means (besides the state) the entrepreneurs – perceived of the pioneer, whether/how they imitated, imported, or avoided results of the pioneer, and whether/how they managed to make up for the pioneer's lead in a relatively short time.⁷

(d) One of the instruments by which latecomers managed to catch up with the pioneers seems to be a stronger emphasis on formal education and schooling rather than on empirical training. This hypothesis can best be checked by analyzing the relationship between the educational system, the educational background of entrepreneurs, and their performance.

(e) Backward countries – more than less backward countries – display certain traditions that are obstacles for a smooth industrialization and that had to be recognized and removed by entrepreneurs (or – less interesting in this context – by the state). Such obstacles include: scarcity or dispersion of available capital; scarcity of skilled labor; low business moral; public distrust of industrial/commercial activities and, one might add, strong anti-industrial, anti-capitalistic values in powerful or large groups of the society; a traditionally conditioned inability to strictly separate economic roles from social and political roles. If not the state, it was the entrepreneurs who developed institutions, instruments, strategies, and means to overcome these obstacles; one may think of banks, joint-stock devices, early integration and diversification, conscious policies of paternalism, firm-owned schools, certain management techniques, strategies of self-legitimation, and so forth. Such devices, which had an observable impact on the development and growth of the enterprise and the economy at large, did not originate automatically but were intended products or unintended by-products of entrepreneurial decisions and actions on the basis of entrepreneurial perceptions and motives. Again, the backwardness hypothesis leads into entrepreneurial history.

(f) In general, the theory of backwardness draws attention to the different pre-industrial and proto-industrial traditions in industrializing countries. It emphasizes their importance in explaining the different timing, speed, and quality of the industrialization processes. It assumes that the way a country starts to industrialize has a lasting effect on the structure of the industrial society that emerges. And it stresses that certain given conditions may impede industrialization in the beginning but become dynamic forces later. What has been a liability first may become an asset later; relative backwardness may produce relative modernity. One can use and test this notion in entrepreneurial history.

(2.) There is a second reason for using this approach for the present purpose: this set of concepts, hypotheses, and propositions is broad enough to permit (and require) the analysis of economic, social, and cultural factors and their interdependence; it thus permits us to probe how social and cultural factors influenced the development of entrepreneurship and economic change – and these aspects will be at the center of the following discussions.⁸ But it simultaneously draws the researcher's attention to the fact that the social and cultural attitudes and practices under scrutiny are themselves closely connected with and influenced by economic structures and processes.⁹

(3.) More than other available approaches, the theory of relative backwardness offers itself for *historical* research since it is a historical theory. The time factor is built into this theory, and so is change; the notion of time differentials is central to it,¹⁰ much more so than to structural-functional approaches,¹¹ role theory,¹² behavioral approaches¹³ and simple stage theories.¹⁴ Without denying basic similarities and constant factors in the processes to be explored, the backwardness approach emphasizes the differences in space and time but then offers an explanatory scheme to systematize these differences.¹⁵ Moreover, it refers to types of empirical data that the historian may hope to marshal (at least in principle).¹⁶

(4.) Finally, it should be stressed that this approach is basically comparative. It permits further comparison, not only between the "first industrial nation" and the latecomer but also between one latecomer and another¹⁷ using the different degrees of backwardness and different pre-industrial traditions as the starting points and main criteria of comparison. Different authors have shown¹⁸ that this approach can be extended to include some aspects of modern Japanese history and compare them with British and German equivalents. Parts of the North American experience might possibly be reinterpreted in this comparative framework, too. This paper will not exploit these opportunities of comparison – due to lack of competence and space. Rather it concentrates on some aspects of the German experience and touches only slightly on corresponding developments in other countries. However, it is beyond doubt that, ultimately, a full understanding and explanation of German entrepreneurship and management can be reached only in a comparative perspective.

The Context

Most economic historians seem to agree that German industrialization did not start before the 1830s/1840s – if industrialization is characterized by a fast-growing investment ratio, by massive investments in the

industrial sector, by continuous, self-propelling growth of the GNP (in absolute terms and per capita, in spite of a growing population) and by the development of the factory system based on a quickly developing technology. Compared with the western European pioneers, Germany was an industrial latecomer. It started about fifty years later than England and twenty years later than France – but roughly fifty years earlier than Russia and thirty years earlier than Japan. In terms of relative economic backwardness, Germany took a middle position. The same is true if the relative number of people working in the agricultural sector is used as an indicator. It is estimated that more than 60 percent of the German working population was employed in agriculture at the start of the nineteenth century, while England is estimated to have reached this proportion by the end of the seventeenth century and employed less than 40 percent in agriculture in the early nineteenth century; France is said to have been near 55 percent at the end of the eighteenth century, while it seems that in Japan 80 percent of the population was still in agriculture in the 1860s; even larger proportions are typical for underdeveloped countries today.¹⁹

Unlike many countries that started to industrialize after the First World War, German industrialization was preceded by a long tradition of business and commerce that had developed slowly and created significant inroads into an otherwise primarily agricultural society. Wholesale and long-distance trade, on the one hand, and industrial production from the handicrafts, cottage industries (putting-out system), and manufactories on the other, gradually had overcome the vast setback of the Thirty Years War (1618-48). This was especially true in the west (Rhineland and Westphalia), in Saxony, and in part of southwest Germany, while other German regions, especially east of the river Elbe, were still strictly agricultural.²⁰ By the end of the eighteenth century in some branches of textile production and in the metal industries and mining, some steam power and machinery had appeared. However, these industrial developments remained insular and weak and markets were fragmented and small, compared to the western European models that were strongly admired.

The breakthrough did not come in the traditionally strong and dominant textile sector. Rather, it was the building of the railroads and associated strong acceleration in development of producer goods industries since the second half of the 1830s that brought the first massive disposal of permanent, fixed capital in the industrial sector; the proportion of net investments in the GNP grew strongly; a process of self-propelling growth appeared and was sustained with only short-term interruptions, which is typical of industrializing economies. This was based on an increasingly integrated market that was expanded by economic and

political unity (1834: Customs Union; 1866/67: Norddeutscher Bund; 1870/71: foundation of the empire), and by expansion of the means of transportation (primarily the railways). The proportion of the business and industrial sector of the GNP increased significantly. Within this system (but above all in the raw materials, metal working and textile industries), the modern factory system organized in a private capitalist way was established.

The depression of the 1870s marked the end of the “foundation boom.” Cyclical depressions were particularly long and deep in the following years. A long period of fast and steady expansion started again only in the mid-1890s and lasted, with short breaks in 1900-02 and 1907-09, until the First World War. Between 1873 and 1913 the German GNP tripled. The secondary sector contributed disproportionately to this expansion. While in 1873 about one-third of the national wealth came from industry, crafts, and mining, in 1913 these sectors produced almost one-half. In 1875 about 50 percent of all those employed worked in agriculture; in 1914, 34 percent. In these four decades, Germany, the latecomer, finally overcame its relative economic backwardness. In economic size and economic modernity, it overtook all other Continental countries, and in some important respects (pig iron and steel production, chemical and electrochemical production, maturity of industrial organization and technology) even Great Britain. This expansion of German industry was accompanied by structural changes that were strongly affected by entrepreneurial decisions and, on the other side, were of great significance for the development of entrepreneurship and management: the development toward big business through internal expansion and fusion; the trend toward the separation of ownership and control; the diversification of large concerns through internal expansion or external combination; the cartelization of German industry and the rise of shareholding banks; and finally, the increasing complexity of large concerns through the rise of science in production, distribution, and management. Despite a still very large proportion of small-scale industry, on the eve of the First World War, Germany had a mature and growing economy that – on the level of the large corporations – displayed aspects of outstanding modernity comparable only to that of the United States.²¹

It is a basic feature of the German experience that this pattern of successful economic growth and capitalist development was not really paralleled by the development of a strong bourgeois or middle-class society and a liberal-democratic political system. In contrast to Britain, the United States, and France, Germany had no successful revolutionary tradition preceding the start of industrialization. Partly as a result of the relative economic backwardness, the growing German “bourgeoisie” – although influenced by the ideas of the eighteenth-century Enlighten-

ment – was not powerful enough to win general acceptance for middle-class lifestyles and values; it was not angry enough to break the power of the traditional elites by establishing a liberal parliamentary system. As far as there was revolutionary change in Germany around 1800, it was a “revolution from above”: powerful and efficient central bureaucracies – which on the Continent and in Japan (but not in England and the United States) had developed long before industrialization began – removed certain barriers against modernization. In Prussia – and the pattern was similar in other German states – reform-minded civil servants abolished still powerful remnants of the feudal past, pushed through the legal presuppositions of a competitive market economy and tried to foster economic and social modernization in some (not in all!) respects. They abolished or weakened the guild system, changed the feudal relations between lords and peasants into contractual relations between (privileged) agricultural entrepreneurs and labor, broke down internal and external custom barriers, created a system of general education, and tried to promote industrial development. Their reforms were stimulated by a threat from the outside (the expansion of postrevolutionary France), by the civil servants’ interest in a strong state and bureaucratic power, and by ideas of economic liberalism and philosophical enlightenment. Although German industrialization was not primarily the product of bureaucratic actions but of private entrepreneurs, and although there were some tensions between the bureaucracy and the rising business classes (especially in the most advanced western provinces in the 1840s to the 1860s), German industrialization was not achieved *against* state power but with the support of it. The bureaucratic traditions of German economic, social, and political modernization remained very visible until the middle of the twentieth century.²²

True, it was as part of this nonrevolutionary modernization “from above” that the landowning classes underwent deep changes and adjusted to the new market economy. However, they managed to retain some of their privileges and much of their social dominance and political power. Besides the high civil servants and the military (which gained power and status after the wars of unification, in 1866 and 1870/71, wars that prepared the foundations of the empire and achieved national unity under the guidance of the old elites), the landowners and many aristocrats belonged to the imperial power structure until the breakdown of 1918. Feudal, bureaucratic, and militaristic traditions remained strong despite rapid industrial growth and capitalistic development; if analyzed in terms of current modernization theories (mostly inspired by Anglo-American experiences), there was a strange lack of correspondence in the German development; economic modernization went well with social, cultural, and political traditionalism.²³

How did the relative economic backwardness of the early German development reflect on the German entrepreneurs? How did they contribute to overcome it? How were they influenced by the specific traditions and anachronisms of German modernization? We follow the viewpoints proposed above in part 1.

Social Origins, Mobility Patterns, and Occupational Background of Early Entrepreneurs

As mentioned before, there existed a slowly growing industrial and commercial structure in some German regions before the process of industrialization proper began in the second third of the nineteenth century.²⁴ Leaving the important merchants aside and concentrating on the production sectors, one already can distinguish craft shops, decentralized putting-out establishments, and large-scale factories (centralized private enterprises, largely on a contractual labor basis, but without machinery) in early modern times (long before 1800). It seems that there was very little continuity between these older institutions and the new factories.²⁵ The market relations, technologies, and entrepreneurial tasks underwent such a change in these decades that most of those older institutions did not manage to develop into modern factories; mostly they either broke down (this happened to many manufactories) or continued in their old form (many craft-shops, some of which often developed into factories only two or three generations later). Only in a small minority of cases did the factories of the first phase of industrialization grow out of older institutions; the directors of pre-industrial business enterprises did not normally develop into the heads of industrial enterprises; instances of continuity that, nevertheless, existed were more frequent in the advanced western provinces and Saxony but rare in the backward regions of middle and eastern Germany, where mercantilistic state interventions had had a deeper influence. There were sectoral differences, too: continuity was probably more likely in textiles than in heavy industry, engineering, and, of course, transport. If the backwardness model developed above is correct, there should have been more continuity of this type in Great Britain but less of it in Japan.²⁶

In contrast to this discontinuity on the level of institutions and individual entrepreneurs, there was probably a far greater continuity in familial and social terms. Even when a factory entrepreneur, a craft master, or a putting-out entrepreneur failed to convert the business into a factory, it was often the case that descendants – perhaps in another place or another line of business – did become factory owners. This explains the fact that many famous entrepreneurs of the Industrial Revolution,

particularly in western Germany, came from old families that, even in the seventeenth and eighteenth centuries, had been in industrial or business activities. Stumm, Krupp, Hoesch, and Poensgen stand for complex and old bourgeois business dynasties, often interrelated, and quite similar to aristocratic dynasties in their marriage policies except that here it was not so much a matter of increasing their territories as of increasing businesses, enterprises, entrepreneurial skills, and capital.²⁷

The combination of institutional and personal discontinuity with family continuity is also illustrated by the fact that, of the Berlin entrepreneurs of the first phase of industrialization, only about one in three had inherited the business, while three of four were nonetheless the heirs of businesspeople. Other investigations also demonstrate that the entrepreneurs of the second third of the nineteenth century, in general, were the heirs of independent traders and businesspeople, but did not come from the propertyless lower classes.²⁸

What it shows is this: those new individuals who directed the new institutions were not quite so new; as heirs of independent traders and businesspeople, they profited from traditions that came down from the era before industrialization. They found it easier than others to gain access to and control over capital and to obtain entrepreneurial motivation, knowledge, skills, and contacts, which were primarily handed on within families, though only to the sons. This indicates not only a clear limit on the chances of upward social mobility (which, by the way, was hardly impeded by legal barriers after 1810) but also shows the significance the pre-industrial business and commercial traditions had for German industrialization; it points to the *limits* of German backwardness. If the hypotheses are right, comparative research will show that there was less continuity of this type in more backward countries like Japan or Russia. The proportion of entrepreneurs who were sons of peasants, aristocrats, or civil servants should be higher in these countries.²⁹

The pattern of geographical mobility fits into the backwardness syndrome as well. Despite the political fragmentation of Germany before 1870, there were no real barriers against the geographical mobility of entrepreneurs. In the traditional centers of industry, there was relatively little geographical mobility during the early phases; the geographical stability and permanence of the early entrepreneurs in the Rhineland and Westphalia have always been emphasized. On the other hand, the entrepreneurs of the second third of the century, in areas without an established and strong business tradition, were mostly immigrants. In Bremen, for example, they came primarily from the smaller towns of the north German interior. Very few of the Berlin entrepreneurs of the early industrialization originated in Berlin; particularly in the 1830s and 1840s, they tended to be immigrants and to some extent came from very

distant provinces.³⁰ There was remarkable migration of potential and actual entrepreneurs even before the mass migrations of potential and actual workers commenced. The more advanced industry had been in the old times, the more generational continuity and fewer geographical moves at the start of industrialization, and vice versa.

Finally, one can explore the *occupational* mobility patterns, asking from what occupational position those persons who became entrepreneurs started. It is striking that in nineteenth-century industrialization it was only the exceptional industrialist who had started as a skilled or unskilled worker, as a factory worker or laborer, as a servant or something similar. Apart from some exceptions, the urban lower classes lacked not only capital – as did many entrepreneurs from a craft background – but also useful business and technical knowledge, information about opportunities, and an education that would have passed on motivation and a spirit of enterprise. It is also noticeable that very few peasants, farm hands, and agricultural workers became industrial entrepreneurs. Even if one looks only at the male population, the conclusion is that the great majority took no part in the creation of the industrialist class. The permeability of the society of the time thus had very clear limits. In this respect, Germany differed only slightly from the Anglo-American countries, where the intragenerational chances for upward social mobility seem to have been only a little higher.

In one way or another, the circles from which the entrepreneurs of the Industrial Revolution primarily came had something to do with the business or trading economy – whether as craft masters and apprentices, as merchants, shopkeepers, or putting-out masters, or as technicians or heirs of early factory owners. The great majority of entrepreneurs brought some industrial, technical, or business knowledge with them, and many had financial resources acquired from industrial or business activities.³¹

Entrepreneurs with a crafts or artisan background were most numerous; very often they founded their factories after finishing their journey-worker period and their usual travels (within and outside the German states); very often they moved from one specialization to the other; rarely had they been long-standing masters and owners of established craft shops. Entrepreneurs with artisan backgrounds were most frequent in the metal trades and engineering industries; often they formed a partnership with a former merchant; and it seems that – on the average – their firms remained rather small. Entrepreneurs with a mercantile or putting-out background were nearly as frequent as the craftsperson-entrepreneurs; out of this group, it seems, came the most enterprising individuals, the builders of large enterprises and all-round entrepreneurs (engaged in many different lines at the same time). A third starting position for the leap to the founding and direction of one's own enterprise

was that of the technician. This covered people from various social backgrounds with one of two career patterns: they were either graduates of technical schools or colleges who founded their factories soon after leaving school; or they were technicians, with or without a technical education, who had been employed for some years in factories as supervisors or in some other leading position and had gained much practical experience. As industrialization moved on, a fourth group increased, namely, the number of entrepreneurs who had inherited their concern.³² For the owners of private enterprises (including partnerships), it was one of their assumptions that their offspring would inherit the works and not merely the ownership, but the practical direction, of the concern. This tendency became so strong that, in the second half of the nineteenth and in the early twentieth centuries, entrepreneurs – at least those entrepreneurs who were sufficiently well known to be included in a national biographical handbook – belonged to those groups in German society that had the highest self-recruitment rate. Only the military elite had a higher self-recruitment rate.³³

In conclusion, the overwhelming majority of entrepreneurs of the first phase of industrialization came, in Germany as in France, England, and the United States, from industrial and business trades and activities. This clearly shows how important it was to have had a business and trading tradition before industrialization proper began, and clearly points to the fact that the relative economic backwardness of Germany should not be overstated. In this respect the German pattern was similar to the western European and American pattern. It would be interesting to compare it with more backward countries.³⁴

Social Values and Status – Entrepreneurs' Motives and Ideologies

What made these people decide to take up entrepreneurial activities? What can we say about the psychological, social, and cultural factors determining their motives and decisions? Were the status system and the dominant social values in that situation of relative economic backwardness disadvantageous for the recruitment of entrepreneurs and for the performance of the entrepreneurial role? Did the status system, the social values, and the image of the businessperson's role change when industrialization went on and Germany gradually lost its backward character? It is difficult to say anything precise on these subject matters since regional differences were pronounced and systematic studies are lacking. Only some preliminary remarks can be made.

There were indeed traditions and attitudes in the upper classes and upper middle classes of the German society that made it difficult – or at least less attractive – for the members of these classes to become entrepreneurs. These traditions and attitudes seem to have accounted for the fact that the status of the average businessperson in early-nineteenth century Germany was relatively low – low in comparison to aristocrats, military cadres, bureaucrats, and the more respected groups of the learned professions, but also low if compared with counterparts in contemporary France or the United States.

For the nobility, manual work was of course unacceptable. In addition, for many of them, particularly in the more advanced parts of western and southwestern Germany, trade and industry in general were a form of livelihood incompatible with their social position and group-specific standards. This aristocratic contempt for business pursuits, and the ensuing negative sanctions aristocratic businessmen had to fear from their peers, were phenomena well-known in other European countries, too. These attitudes even seem to have grown and become more explicit since the sixteenth and seventeenth centuries, and, at least in western Germany, stiffened again after the beginning of industrialization; this stiffening of an aristocratic anti-business tradition was probably a defensive reaction against the slow rise of nonaristocratic groups that possessed wealth, claimed status, and sometimes even competed for power. Only if the enterprise was primarily in one of the branches of industry connected with agriculture (such as mining, smelting, brickworks, etc.), or if it was linked with a state appointment, did it become respectable for some aristocrats (for example in Silesia and Bohemia).³⁵ It seems highly probable that these aristocratic conceptions of business activities and businesspeople were responsible for the low degree of aristocratic participation in the formation of the entrepreneurial class in the first phase of industrialization. To the degree that aristocratic traditions influenced public opinion, mentalities, and style in Germany, these anti-business and anti-commercial reservations were carried over into nonaristocratic groups as well. After the 1870s some of these reservations seem to have broken down.³⁶

There was a second source of anti-business resentment and, consequently, a second reason that the social status of most German businesspeople tended to be relatively low, at least in the first part of the nineteenth century. More than in the United States, and probably also more than in Great Britain, the educated middle class in relatively backward Germany adopted a disparaging condescension toward those in trade. The more *Bildung* (education) served as the basis of the middle-class self-conception and its claim to respect, the more academics and officials looked down upon the frequently ill-educated small business-

people and petit bourgeois industrialists of the mid-century. They rather despised these petty traders, craftspeople, and financial dealers who followed "particular" interests striving for financial success, while they themselves, without access to material wealth, carried out "intellectual" tasks and, in the case of officials, served the "general" interest of the state. With this attitude, they certainly did not encourage their heirs to choose the industrial and trading professions.³⁷

The extremely high status of civil servants in most parts of Germany was often noted by surprised foreign visitors from Britain or America. High appreciation for bureaucratic traditions was often tied up with reservations against the nonbureaucratic businessperson, who took risks, strove for profit, accepted competition, and rose on the basis of material and individual success rather than on the basis of formal education and seniority. Military standards and patterns also were clearly distinguished from the standards and behavior of the capitalist entrepreneur.³⁸ The continuous strength of bureaucratic traditions and the growing strength of militarism in Germany contributed to the fact that business values and capitalistic principles (like competition, risk taking, individual and material success, and dominance of wealth as a criterion of social standing) never gained the general acceptance and public esteem that they did in nineteenth- and early-twentieth-century America. Of course, this reflected on the status of the German businessperson. As an analysis of court ceremonial orders, of marriage patterns, of the political representation of businesspeople within parties and bureaucracies, of the writing by contemporary observers, of popular literature, and of the complaints raised by businesspeople would show, their social recognition and political power did not correspond to their economic wealth – notwithstanding tremendous differences between various types of businesspeople, from various regions and different decades. German society never became a "business society,"³⁹ and the German political system was never a purely plutocratic political system serving mainly the interests of the capitalist class.⁴⁰

However, I hasten to add that strong countertendencies modified the picture remarkably.

In general, even in the first decades of the nineteenth century there was no outright hostility toward business activities on the part of the German upper classes and the public at large. For decades it had been normal – with regional variations – to reward trading and industrial success with the grant of a noble title. The respect and high regard with which economic success was held under the mercantilistic economic policy of the absolutist princes of the seventeenth and eighteenth centuries had contributed to the rising evaluation of business activities within predominantly agricultural societies having strong feudal tradi-

tions. Economic success had been regarded by the absolutist rulers and their bureaucracies as an instrument and token of national greatness; while their economic interventions and promotional activities met with failure more often than not, their impact on the general image of economic innovation and success was positive and should not be underestimated. Some ideas of the philosophy of the Enlightenment, which in the eighteenth century became very popular with the educated public, at the courts, and with the ruling elites, had a similar effect. In this ideological context, the businessperson – especially the long-distance merchant – became something of a symbol for unprejudiced, cosmopolitan, experienced, rational behavior. Because of this, the businessperson's social status may have slightly increased. In the western regions, without strong absolutist rule and with advanced business traditions, the merchants, putters-out, and factory entrepreneurs were even at the top of the social pyramid of their communities, combining wealth with high status and political power on the local level. Mostly of Protestant faith, their belief system legitimized work and economic success in religious terms.⁴¹

Even in the eighteenth century and in the more backward parts of the country, economic success, the display of wealth, and "conspicuous consumption" were possible and admired although they did not fit into the traditional corporate order.⁴² By the eve of industrialization, the destruction of the old corporate system had been largely completed – by absolutist rulers, bureaucratic reformers, the ideas of Enlightenment, French influences, and autonomous socioeconomic change. The less petrified and self-evident that traditional symbols, lifestyles, norms, and laws became, the more opportunities appeared for individual expressions of life and work; new symbols of individual achievement, rise, and success became available. There was observable change enough in these decades; many people – especially those in the middle and upper strata of society and those in towns and cities – learned that their fate was not an unchangeable given but could be improved by individual (or even by collective) striving and action. In these years of change, an increasing number of people seem to have understood that wealth, status, and life chances could be achieved instead of being definitely ascribed. A close analysis of the contemporary literature in the field of economic and social science seems to show that the principles of change and innovation gained respectability also in Germany (though later and less so than in England).⁴³ In early nineteenth-century Germany innovation, change, and business activities were not stigmatized; they were neither socially nor legally forbidden for the majority nor reserved for marginal groups. Despite all backwardness, this was no longer a static society (if it ever was), and the researcher who deals with entrepreneurship in early German industrialization does not have to look for low-status minorities or outsider groups.⁴⁴

As many contemporaries have observed – mostly in a mood of regret and cultural criticism – in the course of the nineteenth century, visible economic success gained relative importance in determining one's social standing. Economic factors became more and more important – though within limits, as mentioned above – in determining social relations and even cultural phenomena. This seems to be a general aspect of industrializing societies; the German experience was no principal exception, but different only in degree and flavor. The more important that wealth, money, economic power and “conspicuous consumption” became, the more status accrued to rich businesspeople, the more attractive such careers must have become.⁴⁵

Other developments also tended to reduce anti-business reservations in the German public. Insofar as industrial technology, from the mid-century on, went hand in hand with the natural sciences, it was possible for the heirs of academics to find their way into industry with a justification in terms of scientific progress – clearly an “intellectual” value. The rhetoric of progress, with which bourgeois economic groups demanded the development of transport, trade, and industry, was increasingly combined with nationalist overtones. The demand for “industry for the fatherland” was heard even before 1848 in the individual states. In state policies, it served as an argument for promoting industry, which, particularly in Prussia, tried to spread technical knowledge through technical and business education, through the creation of business societies, and through exhibitions and public competitions and which tried to induce entrepreneurial initiatives on national-political grounds. The call for the strengthening of “industry for the fatherland” was soon linked with national-liberal hopes for political unity, as in the political demands of liberal entrepreneurs in the Rhineland before 1848, and in the emerging engineering associations of the 1850s and 1860s. Later, after the wars of unification, in which industry and technology for the first time were conceived of as instruments of war and were celebrated as one of the causes of victory, this national and soon nationalistic ideology of industrial progress and economic expansion was strengthened, and finally flowed into imperialist propaganda at the turn of the century.⁴⁶

In the course of these social and psychological changes, the reservations of nobles and members of the educated middle class about industry and trade weakened, particularly with regard to the manufacturing industries, which were scientifically interesting and of central importance to national power and prestige. It was in this changing sociocultural mixture of relative backwardness and modernity, of anti-business traditions and pro-business ideologies that people decided whether to become entrepreneurs. Closer analysis seems to show⁴⁷ that in the first phase of industrialization, the search for economic success and the striv-

ing for profit were powerful – probably the *most* powerful – motives for people to take up entrepreneurial activity. Those who came from long-distance and wholesale trading were accustomed to striving for profit and the search for economic success on the basis of new opportunities, although for the most part they were sufficiently well off to be able to satisfy the material needs of life either adequately or well. They were accustomed to regarding economic success as an important determinant of status and power.

Others were often propelled by their inadequate economic and social position. One must remember that real incomes dropped slightly after 1820 and then – after 1850 – stagnated until the last third of the century; that because of the generally low level of incomes, even minor economic downturns created crisis situations for the lower classes and the lower middle classes; and that in the business and industrial sector unemployment and underemployment were widespread. The prospects for an unestablished craft apprentice without property were at best very uncertain, if not plain bad. There were not many chances for such a person to establish a position, especially while trying to create the basis to start and support a family. The struggle with actual or potential poverty was an elementary driving force behind the energy, drudgery, and readiness to risk with which many entrepreneurs went hopefully from one project to another – projects that they started, tried, and failed but did not give up, finally, perhaps, succeeding, with agony and with the help of the entire family, in creating a secure, prosperous, and respected independent position.

In addition there frequently existed a strong desire for independence, a marked stress on status, and aspirations for power and dominance. It is characteristic that, in several known cases, technicians preferred an independent position as entrepreneur to a more secure but, in the long term, probably less profitable and above all dependent position as an official. Heirs of entrepreneurs sometimes founded their own businesses rather than play the role of junior boss in the family firm and wait for inheritance.⁴⁸

To many, the striving for economic success and individual independence and mastery was meaningful in itself and needed no additional legitimation. They may have regarded it as rational in the spirit of their time, and they often vaguely believed that the chance for individual success was open to everyone as well and that in the end the general good would follow if everybody would seek enlightened self-interest and obey the rules and laws. They hardly needed an additional “New Deal of emotions”⁴⁹ and in this they probably resembled many entrepreneurs in western Europe, the United States, and other parts of the world.

However, large groups of early entrepreneurs preferred to frame their ambitions and striving in the context of visions, ideologies, and aims that clearly transcended the narrow economic sphere; this is where the social and cultural context of the specific country comes in.

Especially in the westernmost parts of Germany, early entrepreneurs displayed a high evaluation of work on ethical and religious grounds and thus legitimized economic achievement and success, even when this was no longer necessary for the satisfaction of immediate personal needs. Success in work not only ensured the support of one's family; it also formed the basis of pride in one's achievements, the individual's personal honor, which according to bourgeois conceptions was always linked with honesty, quality, solidity, and diligence. For the often devoted Protestant entrepreneurs of that time, it was also a pledge of the love of God.⁵⁰ This conception of work and achievement legitimized the hard work and the thrift (also in private life), the sense of order and sobriety, the rationality and the pleasure in the making of money. It thus legitimized motives and virtues whose objective function – though rarely conscious purpose – was to secure a rational leadership of the firms and the profitability of the invested capital, to encourage the expansion of the business through self-financing, and to subordinate the private life of the entrepreneur's family to the success of the enterprise. It conferred sense upon a concern with success and expansion, which otherwise might have appeared senseless.⁵¹

A second way of legitimizing restless striving for achievement, success, and expansion of the firm was based on the strong family orientation of those early entrepreneurs. Many of them perceived their firms as vehicles for the rise, wealth, and reputation of their families. They thus gained a long-term perspective that made it easier for them to renounce short-term advantages and accept personal sacrifices if doing so would help the long-term success of the firm. Take the following quote of Werner Siemens as an example: "It is my main concern ... to found a lasting firm, which perhaps one day, under the leadership of our boys, could become a world firm like Rothschild etc., and bring our name to the notice of the world. The individual must be willing to accept personal sacrifices for this great plan, if he thinks it a good one."⁵²

Finally it should be noted that the role of national arguments, which sometimes motivated German businessmen, legitimized their economic pursuits and served as a rhetorical basis for status claims and their demands for favorable legislation. In the early times resentments against the powerful British competitor were voiced, industrial success was praised as a means of freeing Prussia – or Germany – from the dominance of foreign influences. German railway entrepreneurs either saw or sold their achievements as a means of national promotion, as a patriotic

and civilizing mission, as well. In the wars of 1866 and 1870/71, technical superiority and industrial strength for the first time were recognized as a basis of military strength. Consequently, some branches of industry (especially coal and iron, heavy machinery, and chemicals) were now often celebrated as vehicles of national greatness. In addition, the imperialist mood that had increased since the 1880s and climaxed in the first decades of the twentieth century provided new devices of legitimization for the export industries and German businesspeople – the *Wirtschaft* – in general. Economic success now was frequently associated with national strength; it seemed to serve not only private ends but also purposes of national power in the heated international competition of the imperialist era.⁵³

Businesspeople liked to make use of that. But it is difficult to decide whether patriotism and nationalism were really motivating forces or, rather, convenient rhetorical tools in Sunday speeches and public relations. One thing seems clear, however: nationalism was less influential among early entrepreneurs' motives than economic, ethical, and family-related ones; to the extent it did play a role, its impact was much stronger after the foundation of the empire (1870/71), that is, in the second phase of industrialization, when German economic backwardness was already strongly reduced and then quickly overcome. So it seems indeed difficult to regard nationalism as *the* development ideology of German industrialization in the context of relative economic backwardness. Perhaps this unproven hypothesis of Gerschenkron⁵⁴ fits better with Japan than with Germany.⁵⁵

Summing up, one can say that there existed strong traditions and values in the German sociocultural system that were hostile toward entrepreneurial virtues, capitalist behavior, and economic success. Due to its relative economic backwardness and specific traditions, which continued to be effective, Germany was far away from becoming a "business society." As far as one can tell, this did not really hinder the development of German entrepreneurship. Why?

On one hand, alternative sets of largely traditional values were available that could motivate and/or legitimize entrepreneurial ambition and economic success. Religious, family-oriented, and national values were particularly important in this context. On the other hand, those anti-business mentalities mentioned before were not very solid and insurmountable, since manifold changes had long been going on in German society when industrialization began. They weakened even more when industrialization developed. The social sanctions against strictly profit-oriented motivations, against the praise of economic success, and against openly capitalist behavior were not strong enough to be prohibitive; the status of businesspeople was relatively low, but not low enough to have

a tangible negative impact on entrepreneurial recruitment and selection.⁵⁶ In other words: the relative backwardness of the German situation was *limited*, such that the need for a “New Deal of emotions,” for non-economic ideological stimuli, was not very strong.

Finally, it can be argued that some noncapitalistic, nonbusiness aspects of the German status and value system were conducive to entrepreneurial ambition and economic success. One can argue that certain aspects of relative backwardness on the sociopsychological level and the lack of alternative opportunities (e.g., in politics) for German middle-class businesspeople – which in itself was a consequence or aspect of the continuing high status and power of the traditional nonbusiness elites – stimulated the economic ambitions of these people and directed their energies into the economic sphere while they adjusted to aristocratic superiority in the sociopolitical realm and accepted the skillful dominance of the older elites in principle.⁵⁷

The German example seems to show that there is no simple, positive correlation between, on the one hand, high status and social recognition of businesspeople and, on the other, entrepreneurial performance. Certainly, status may be so low, and negative sanctions so strong, that the recruitment and performance of entrepreneurs are stifled and weakened; but once a certain threshold is crossed and stigmatization has ceased, it may well be that entrepreneurial recruitment and performance are even favored by incongruencies between economic wealth, social status, and power. The continuing effectiveness of traditional values and mentalities does not necessarily reduce the effectiveness of economic development – quite the contrary.

Entrepreneurial Qualifications

Germany's relative latecomer status and pre-industrial traditions also reflected on the qualifications of its entrepreneurs. German entrepreneurs had the chance to observe technological, commercial, and organizational achievements within the more advanced Western countries and used them by imitation and adaptation. In German industrialization, the most important exporter of know-how, more important than France or Belgium, was Great Britain; the significance of the United States, because of its distance, was small, but it grew toward the end of the nineteenth century, and in the twentieth, to become a more important exporter than Britain. English experience, in particular, was central for the German engineering, steel, and textile industrialists; France and Belgium played a large role for the early traveling craftspeople and for bankers; experience from the United States affected primarily some later techni-

cians, engineers, and organizational experts. Of the methods by which this knowledge was transmitted, the most important was the trip abroad by the future or already-practicing entrepreneur, an heir, or a leading employee; this was more important than migrations of foreign entrepreneurs and technicians (such as Cockerill, Mulvany, Thomas, and Dobbs) and more important than the recruitment of foreign workers or the distribution of written information. Up to 1870 almost every third entrepreneur in the Rhineland and Westphalia had been on business or study trips abroad. Entrepreneurs in the extractive raw materials and chemical industries were over-represented amongst the traveling industrialists.⁵⁸

This is not the place to trace the manifold and changing channels through which German entrepreneurs imported the experiences of others. Nor can we discuss the economic results in detail. Suffice it to say that, on the basis of imported technology, some branches of German industry tried to jump over the first phase and to start immediately on a more advanced level. This led, in the early period, to laying foundations that, in their emulation of the English model, quite overlooked the fact the German market and infrastructure were not at all adapted to such advanced forms of production. There were failures from this fact alone.

On the other hand, the importation of technology beyond the actual needs of the time led to early impulses and a certain excess in production-technology development – an excess that sought, in turn, to create a demand and that, once there was a demand, could more easily meet it. Thus what in the short term and for the individual firm might have been a commercially mistaken decision could, in the long run, be a positive impetus to growth. The same mechanism contributed to an early trend toward bigness and relatively large-scale organization in the early stages of German industrialization.⁵⁹

The early emphasis on technological progress was supported by the relatively rapid development of German technical schools and higher education. In the meantime, it was a simple fact that German entrepreneurs possessed more schooling and formal technical education than their English counterparts. One can interpret this British-German difference in terms of the latecomer syndrome and relative economic backwardness.

On one hand, continuous and relatively slow development is more easily built on traditional knowledge (handed down on an empirical basis) than on trying to jump from relative backwardness to relative maturity. In the latecomer country, forms of transmission of knowledge that go beyond empirical demonstration and imitation (in the sense of master-apprentice relationships) become necessary: past experiences must be collected, transformed into a systematic body of knowledge, and transmitted to those who will use them; consequently, learning in schools increasingly comes to supplement learning in the workshop or

the counting house. On the other hand, the stronger emphasis on formal education in less advanced countries seems to follow from the fact that the state plays a bigger role in their development, and the founding of general and technical schools is a task which is apparently more easily done by public bureaucracies than by private initiatives. To governments that try to overcome relative backwardness, education must appear to be a major, though expensive, device.⁶⁰

In the Prussian case, this mechanism of relative backwardness and of ensuing state development policy, absolutist traditions, and a high esteem for education in the German middle class and bureaucracy all joined together in establishing a relatively advanced system of general schools that made the illiteracy rate among young males (conscripts) sink to 24 percent in 1875 (which was then very low by international standards). Similar factors came together in initiating a largely state-sponsored system of technical schools after about 1820 that, probably earlier than in all other countries, provided for technically trained "cadres" to be used in the developing industries. (The development of commercial schools clearly lagged behind.) In all probability, the founding of and support for this educational system was the single most important contribution of the Prussian/German government to the development of an industrial system (besides removing certain barriers – like internal custom walls and legal restrictions on the mobility of the factors of production).⁶¹

However, among the entrepreneurs of the first phase of German industrialization, an empirical education was dominant: one had to have either a limited elementary-school education plus a crafts apprenticeship and a period of travel or a medium-level school education plus some kind of business training. A growing minority of industrialists had, in addition, some practical experience on the industrial shop floor; they had worked in one of the "nursery firms" (e.g., Egells, Borsig), or – in the case of industrialists' heirs – at least partially in their families' firms. The increasing number of technical schools seems to have educated more qualified technical employees than independent entrepreneurs, and undoubtedly they had much greater influence in the last third of the century than in the second.

But even in the early decades, they left their mark on the education of industrialists. An increase of the average educational level of entrepreneurs is clearly observable even before 1870; this increase was closely linked with the increasing number of second-generation entrepreneurs, who inherited their businesses, were deliberately educated for business, and possessed an above-average educational background.

Within their families, the heirs of entrepreneurs – usually men – were exposed to the values and norms of the behavior of the parents. The edu-

cation of children in the closely knit entrepreneurial families in the Rhineland was strict, religious, and, in the case of the sons, oriented to the inculcation of business and bourgeois virtues. Great emphasis was placed on the strict fulfillment of duties at home and at school. Only the sons of the smallest factory owners, those emerging from the crafts position, had to content themselves with an elementary-school education and then immediately did their practical apprenticeship, normally in their families' firms. Most heirs of wealthier factory owners, however, at least in the Rhineland, were privately educated and then went to a secondary school until they were fifteen or sixteen. They did not have much sympathy for the humanistic grammar-school education; they preferred the natural sciences and modern languages. Then they frequently got practical training with emphasis on either business or technical matters, normally in the family firm, but often in some other highly respected company in the same line. Before they entered their family firms, the heirs then normally worked some years abroad as employees. Increasingly, this traditional education of the heir was supplemented with attendance at a technical school or college.⁶²

The increase both in general education and in business and technical training is shown in a sample of 400 entrepreneurs from the Rhineland and Westphalia (1790 to 1870; see Table 1).

Table 1 Education of Entrepreneurs in Rhineland and Westphalia, 1790-1870 (%)

| | 1790- 1810 | 1811- 1830 | 1831- 1850 | 1851- 1870 | 1790- 1870 |
|----------------------|---------------|---------------|---------------|---------------|---------------|
| General education: | | | | | |
| Elementary only | 72.8 | 58.3 | 31.4 | 19.2 | 43.5 |
| Higher | 27.2 | 41.7 | 68.6 | 80.8 | 56.5 |
| Specialist training: | | | | | |
| Exclusively | | | | | |
| empirical-practical | 96.3 | 95.8 | 67.5 | 47.7 | 74.0 |
| Business or | | | | | |
| commercial school | 0.9 | 2.8 | 16.8 | 14.6 | 9.3 |
| Higher | | | | | |
| academic studies | 2.8 | 1.4 | 15.7 | 37.7 | 16.7 |
| Number of cases: | 109 | 72 | 89 | 130 | 400 |

Source: H. Beau, *Das Leistungswissen des frühindustriellen Unternehmertums in Rheinland und Westfalen* (Cologne, 1959), pp. 66-68.

Apart from the raw-material industries, in which the long tradition of the state mining officials' education had created a special situation, and leaving out the new tendencies in the very small chemical industry

after 1850, the proportion of entrepreneurs with a technical-school or technical-college education was very small: 10 to 15 percent. But from 1830/1850 it notably increased. This was, on the one hand, a result of changing technology and, linked with it, of the development of technical schools and colleges. On the other hand, this change was a result of the absolute and relative increase in the numbers of heirs of enterprises who had been educated in the ways outlined above. There was no increase of theoretical business education parallel to the improvement of theoretical technical education. After 1830 (though not before), most industrialists had, in addition, a general education that went beyond the elementary-school level. By the end of the first phase of industrialization (1873), a better general education for the average entrepreneur had become the rule. This meant not only increased respect and higher status within education-conscious public opinion. In all probability it also meant improved qualification and increased preparedness for entrepreneurial performance.

With the rise of technical science in industry in the late-nineteenth and early-twentieth centuries, the technical-college education quickly extended and achieved formal equality with the universities; in 1899, technical colleges gained the right of granting doctorates. The proportion of entrepreneurs with a technical-college education increased. On one hand this was again partly due to the increased number of heirs among entrepreneurs; on the other hand, it was due to the increasing proportion of salaried entrepreneurs who, on the average, possessed a higher educational background than owner-entrepreneurs. The investigation of a sample of thirteen-hundred well-known entrepreneurs in the period 1890-1930 shows that 52 percent of the directors (salaried entrepreneurs), but only 37 percent of the owner-entrepreneurs, had an academic education. For only 5 percent of the directors, but 10 percent of the owner-entrepreneurs, the school education was limited to the elementary level. The rest (43 percent of the directors and 53 percent of the owner-entrepreneurs) had a secondary-school education but no academic training.⁶³ Salaried entrepreneurs usually had reached the top through quasi-bureaucratic careers starting in middle management or staff positions that were reserved largely for applicants with a minimum educational background and a corresponding degree.⁶⁴

Of course, these were only tendencies: in contrast to the recruitment of public officials, higher school qualifications were not an *indispensable* requirement for access to the highest entrepreneurial positions, less so – it seems – than for staff and certain middle-management positions. Even in 1953 only some 31 percent of a sample of 12,000 board members and owners of businesses had an academic degree, a good third of which were in engineering.⁶⁵ But in large corporations and in specific industries –

especially in the electrical manufacturing and chemical industries – the proportion of scientifically trained entrepreneurs was much higher than these figures indicate. And although academic education was not the rule for entrepreneurs, it should not be forgotten that most of them had some sort of secondary education, which – in the *Realschule*, in the *Realgymnasium*, and especially in different types of technical and commercial secondary schools – stressed subject matters with direct relations to economic life. So far, there is no way to spell out the precise impact of the German school system on the performance of German entrepreneurs. It has been argued – by entrepreneurs, for example – that *real* entrepreneurial qualities cannot be learned at school but are picked up by practicing and/or are present by talent.⁶⁶ Indeed, it seems convincing that the rise of technical, commercial, and industrial school systems contributed more to the high quality of various types of employees than to the excellence of entrepreneurship.

Nevertheless, most economic historians seem to think that the German educational system had a positive, rather than negative, impact on the development of German entrepreneurship; that this was especially important in certain branches dominating the later phases of industrialization (chemicals, electrical manufacturing, engineering, etc.) in which Germany came to excel; and that a stress on technological progress, which in the long run also paid off commercially, was closely tied up with this stress on formal education (which often was on the technical side).⁶⁷ Again, it would seem that the specific latecomer status of Germany resulted in specific devices that – the later the country, the more the devices – became assets in the process of growth; entrepreneurial qualification and performance seems to be one of the channels through which this mechanism worked.

Further Perspectives and Conclusions

It would be most interesting to analyze German entrepreneurial performance, its techniques, and its results in terms of relative economic backwardness and in terms of the latecomer syndrome. For example: German entrepreneurs were confronted with the problem of capital scarcity, itself an aspect of relative economic backwardness. They solved it by developing and applying special devices: the joint-stock company, which became popular in Germany relatively early, and the investment banks as a means of collecting, mobilizing, and investing capital that otherwise would have found its way into industry only with difficulty or not at all.⁶⁸ These devices later turned out to facilitate the rise of the modern

corporation and the change toward "managerial capitalism." In turn, they strongly affected the pattern of entrepreneurship and management.

Another example: the scarcity of *skilled* labor – so typical for a relatively backward country – meant a great challenge for German entrepreneurs. They responded by developing certain devices of personnel management that seem to be typical for a system starting at a middle level of economic backwardness. Most of these devices were invented anew. However, others were developed out of older traditions that were available as models and could be adapted to new requirements. It could be shown in detail how techniques of personnel management and patterns of employer-labor relations in Germany reacted to conditions of relative backwardness and how they were influenced by bureaucratic, feudal, and military models and by family and handicraft patterns handed down from pre-industrial times.⁶⁹

A third example: contrary to what one may conclude from the British and the American experience, functional integration and product diversification of large-scale firms are not only results of an advanced industrial development appearing at a later stage of a country's industrialization; rather they also may indicate relative economic backwardness and appear at a very early stage of a country's development. So it seemed to be in Germany. Challenged by underdeveloped markets, a backward commercial and transport system, a poorly developed division of labor in the economy at large, and weak traditions of impersonal and market-adjusted behavior patterns, German entrepreneurs – in order to exploit the technological and economic opportunities they perceived abroad – often, and early, decided to functionally integrate backward and forward and to diversify in order to survive. Relative modernity of the single firms was the only way to cope with the relative backwardness of the economy at large. Thus strategies of growth, patterns of organization, and techniques of management were quickly developed, facilitating the modernization of industry for decades.⁷⁰

In these three respects there seem to be striking similarities between Germany and Japan, two countries sharing some features of relative economic backwardness when compared with the "first industrial nations." An early trend toward separation of ownership and control, that is, "managerial capitalism," a very remarkable emphasis on nonmarket devices in personnel management and in employer-labor relations, and the early tendency toward large-scale organization, functional integration, and product diversification seem to be even more pronounced in the Japanese case than in the German.⁷¹

It was not the purpose of this essay to generalize on those aspects of entrepreneurship that are typical of entrepreneurs in all capitalist systems; such aspects certainly exist, but they can be formulated only on an

abstract level: the capability and readiness to combine the factors of production, market- and profit-orientation, and certain innovative capabilities would seem to be among these general characteristics of entrepreneurs. Rather, the purpose of this paper was to pay attention to some peculiarities of German entrepreneurship, their socioeconomic and sociocultural determinants and their economic effects; these specific aspects were presented in a tentatively comparative perspective using the concepts of relative economic backwardness and late development. The origins and recruitment, the motives and ideologies, the qualifications and some achievements of German entrepreneurs were discussed. These aspects of German entrepreneurship were analyzed, on the one hand, as consequences of socioeconomic and sociocultural structures and processes; on the other hand, I have tried to understand them as factors that influenced economic growth and change. In other words: the concept of economic backwardness was used to analyze entrepreneurship both as a dependent and an independent variable and as a factor mediating between overall economic, social, and cultural structures and economic development.

German entrepreneurship was analyzed as entrepreneurship in a country starting its industrialization on a middle level of backwardness. There was a sufficient degree of backwardness to inspire and develop devices that later became productive; there were pre-industrial and proto-industrial traditions that lived on and facilitated economic modernization.⁷² However, it is important to see that German backwardness was limited. The gap between the latecomer and the pioneer – in other words, the gap between what was and what needed to be done – was not as large and discouraging as the gap between the peripheries and the centers today. In the categories used, the German entrepreneur turned out to be a specific mixture of backwardness and modernity that was highly conducive to economic growth.⁷³

Notes

1. In this essay, entrepreneurship and entrepreneurs are defined in a functional sense: entrepreneurs make the basic ("strategic") decisions on the goals of the enterprise, its position in the market, and its relation to the economic and social environment at large, according to criteria in which profits and return on capital play a major role; these include decisions on mobilization and combination of the factors of production and especially on investment, allocation of funds, and acquisition of new man-

- agerial personnel. Cf. F. Redlich, *Der Unternehmer* (Göttingen, 1964), p. 97f.; A.D. Chandler and F. Redlich, "Recent Developments in American Business Administration and Their Conceptualization," *Business History Review* 35 (1961): p. 24ff.
2. Of course, these questions refer only to one aspect of the broad topic of entrepreneur and the social order. Another aspect would be the impact the development of the entrepreneurial class had on social and cultural change, on changes of the class structure, conflicts, the status system social values, politics, etc. This essay concentrates on the first aspect, and the second is included only as far as it has repercussions on the first.
 3. Cf. P. Kilby, "Hunting the Heffalump," in *Entrepreneurship and Economic Development*, ed. P. Kilby (London, 1971), pp. 1-40: a good discussion of different approaches and controversies in the study of entrepreneurship. A good critical report on the present state of German entrepreneurial and business history is found in: H. Jaeger, "Business History in Germany: A Survey of Recent Developments," *Business History Review* 48 (1974): 28-48.
 4. The problem of selection is especially urgent, since it seems there is hardly anything in the social and cultural world that would not have at least slight or indirect relevance for entrepreneurship – from demographic change and the family structure to education and social values. This essay does not, of course, attempt to be exhaustive.
 5. Cf. A. Gerschenkron, *Economic Backwardness in Historical Perspective* (Cambridge, MA, 1962), esp. pp. 5-51, 353-64; idem, *Continuity in History and Other Essays* (Cambridge, MA, 1968), esp. pp. 77-97; idem, *Europe in the Russian Mirror* (Cambridge, England, 1970), esp. p. 86ff. R. Dore, *British Factory – Japanese Factory: The Origins of National Diversity in Industrial Relations* (London, 1973).
 6. See the interesting suggestions by Dore, *British Factory*, p. 410 (with respect to Japan and Great Britain).
 7. The hypotheses under (b) and (c) are explicit and central parts of Gerschenkron's theory. They directly refer to the perceptions, motives, ideologies, values, and actions of entrepreneurs. They seem to require excursions into entrepreneurial history. It is rather surprising to see that Gerschenkron himself does not seem to expect very much from entrepreneurial history. Cf. A. Gerschenkron, "Social Attitudes, Entrepreneurship, and Economic Development," *Explorations in Entrepreneurial History* 6 (1953/54): 1-19. However, he seems ready to concede (pp. 5, 9) that entrepreneurial history may have some illuminative merits, especially in relatively backward countries.
 8. This, of course, is a very selective application of the backwardness approach. It also could be used to explore primarily economic causes of entrepreneurship and economic change (which is not intended here).
 9. It should be repeated, however, that every conceptual framework is selective and that, of course, some aspects of the general topic are not treated by an analysis following the lines proposed here. This is why an analysis more extended and thorough than this essay intends to be might find it desirable to supplement the concepts and hypotheses mentioned previously with other categories and viewpoints from other approaches and theories.
 10. The different timing of the same processes in different countries produces qualitative differences between such processes.
 11. Cf. T. Parsons and E. Shils, eds., *Towards a General Theory of Action* (Cambridge, MA, 1952); B.F. Hoselitz, *Sociological Aspects of Economic Growth* (Glencoe, IL, 1960), pp. 23-51; a short summary of this approach and its application for entrepreneurial history: A.P. Alexander, "The Supply of Industrial Entrepreneurship," *Explorations in Entrepreneurial History*, 2nd ser., vol. 4 (1966/1967): 142ff.
 12. Cf. T.C. Cochran, "The Entrepreneur in Economic Change," *Explorations in Entrepreneurial History*, 2nd ser., vol. 3 (1965/66): 25-37; idem, "Role and Sanction in

- American Enterprise," in *Explorations in Enterprise*, ed. H.G.J. Aitken (Cambridge, MA, 1965), pp. 93-112.
13. Cf. J.H. Kunkel, "Values and Behavior in Economic Development," *Economic Development and Cultural Change* 13 (1965): 257-77.
14. Cf. W.W. Rostow, *The Stages of Economic Growth*, 2nd ed. (Cambridge, England, 1971).
15. Pejorative associations are easily aroused by the word "backwardness." It must be clear that in this essay the word is used without such a value component. Because such associations are hard to suppress, maybe it would be better, in the long run, to use the concept of "late development syndrome" instead (Dore, *British Factory*, p. 415).
16. Quite in contrast to theories based on the notion of changing socialization processes within the families of the preceding centuries. Cf. E. Hagen, *On the Theory of Social Change: How Economic Growth Begins* (Homewood, IL, 1962). We have no data to test such a theory.
17. The arguments of this paper are limited to entrepreneurs in capitalist systems and the period up to 1914.
18. Cf. J. Hirschmeier, *The Origins of Entrepreneurship in Meiji Japan* (Cambridge, MA, 1964); H. Rosovsky, "Japan's Transition to Modern Economic Growth 1868-1885," in idem (ed.), *Industrialization in Two Systems: Essays in Honor of Alexander Gerschenkron* (New York, 1966) (used here in the German translation: "Japans Übergang zum modernen Wirtschaftswachstum 1868-1885," in *Wirtschafts- und sozialgeschichtliche Probleme der frühen Industrialisierung*, ed. W. Fischer [Berlin, 1968], pp. 118-78); D.S. Landes, "Japan and Europe: Contrasts in Industrialization," in *The State and Economic Enterprise in Japan*, ed. W.W. Lockwood (Princeton, 1965) (used here in the German translation: "Die Industrialisierung in Japan und Europa: Ein Vergleich," in *Wirtschafts- und sozialgeschichtliche Probleme*, ed. Fischer, p. 29-117); Dore, *British Factory*.
19. S. Kuznets, "Underdeveloped Countries and the Pre-industrial Phase in the Advanced Countries," in *The Economics of Underdevelopment*, ed. A.N. Agarwala and S.P. Singh (Bombay, 1958), pp. 135-53, esp. 143; Rosovsky, "Japan's Transition," p. 143f.; E-W. Henning, *Die Industrialisierung in Deutschland 1800-1914* (Paderborn, 1973), p. 20.
20. "Putting-out system," "manufactory," and other concepts are circumscribed at the start of chapter 1. Cf. M. Barkhausen, "Staatliche Wirtschaftslenkung und freies Unternehmertum im westdeutschen und im nord- und süd-niederländischen Raum bei der Entstehung der neuzeitlichen Industrie im 18. Jahrhundert," *Vierteljahrsschrift für Sozial- und Wirtschaftsgeschichte* 45 (1958): 168-241. Because of these significant regional differences within Germany, it is problematic to generalize on "the German entrepreneurs." Cf. S. Pollard, "Industrialization and the European Economy," *Economic History Review* 26 (1973): 636-48, esp. 636-9 (pleading for a regional approach). The present essay tries to take some account of this difficulty by differentiating between single regions in several cases.
21. Cf. K. Borchardt, *Die Industrielle Revolution in Deutschland* (Munich, 1972); Henning, *Die Industrialisierung*; H. Mottek, *Wirtschaftsgeschichte Deutschlands*, vols. 2-3 (Berlin 1964, 1974); W.G. Hoffmann et al., *Das Wachstum der Deutschen Wirtschaft seit der Mitte des 19. Jahrhunderts*, ed. G.A. Ritter (Berlin, 1965), pp. 63, 204ff., 454ff.; H.-U. Wehler, "Theorieprobleme der modernen deutschen Wirtschaftsgeschichte," in *Festschrift für H. Rosenberg* (Berlin, 1970), pp. 66-107; H.A. Winkler, ed., *Organisierter Kapitalismus. Voraussetzungen und Anfänge* (Göttingen, 1974), esp. pp. 9-57.
22. Cf. also for the following paragraph, R. Koselleck, *Preußen zwischen Reform und Revolution* (Stuttgart, 1967); J. Kocka, "Preußische Staat und Modernisierung im Vormärz," in H.-U. Wehler, *Sozialgeschichte Heute: Festschrift für Hans Rosenberg* (Göttingen, 1974), pp. 211-27. H. Rosenberg, *Große Depression und Bismarckzeit*

- (Berlin, 1967); H.-U. Wehler, *Das Deutsche Kaiserreich 1871-1918* (Göttingen, 1973); R. Dahrendorf, *Gesellschaft und Demokratie in Deutschland* (Munich, 1965).
23. Cf. C.E. Black, *The Dynamics of Modernization: A Study in Comparative History* (1966; Harper Torchbook, 1967), p. 85f.; H.-U. Wehler, *Modernisierungstheorie und Geschichte* (Göttingen, 1975).
 24. Cf. F. Mendels, "Proto-Industrialization," *Journal of Economic History* 32 (1972): 241-61.
 25. Cf. J. Kocka, *Unternehmer in der deutschen Industrialisierung* (Göttingen, 1975), ch. 3; and my "Entrepreneurs and Management in German Industrialization," in *The Cambridge Economic History of Europe*, vol. 7.
 26. Cf. H.J. Habakkuk, "Industrial Organization" (University of Southampton, 1968), p. 4f.; C. Wilson, "The Entrepreneur in the Industrialization," *Explorations in Entrepreneurial History* 7 (1954/55): 129-45. These authors stress the continuity and gradual character of the English development. Cf. Hirschmeier, *The Origins*, who stresses the discontinuity of the Japanese development.
 27. Cf. F. Zunkel, *Der rheinisch-westfälische Unternehmer 1834-1879* (Cologne/Opladen, 1962), pp. 13-33.
 28. Cf. H. Kaelble, *Berliner Unternehmer während der frühen Industrialisierung* (Berlin, 1972), pp. 33, 55, 59, passim; H. Beau, *Das Leistungswissen des frühindustriellen Unternehmertums in Rheinland und Westfalen* (Cologne, 1959), p. 71.
 29. Cf. Hirschmeier, *The Origins*, p. 253ff.; and – in spite of other differences – K. Yamamura, "A Re-examination of Entrepreneurship in Meiji Japan (1868-1912)," *Economic History Review* 21 (1968): 148-58 (reprinted in Kilby, *Entrepreneurship*, pp. 267-86, see esp. 280ff.). Hirschmeier and Yamamura point to the large proportion of rich peasants and *bushi* among early Japanese entrepreneurs; in Germany, entrepreneurs of rural descent were very rare; born aristocrats were the exception (in Silesia and Bohemia, some few in Saxony, hardly any in the west). It seems that the proportion of entrepreneurs from rural origins was a little higher in the United States. Cf. Kaelble, *Berliner Unternehmer*, p. 99, on the basis of C.W. Mills, Lipset/Bendix, Crandall, and others.
 30. Cf. L. Beutin, "Die Märkische Unternehmerschaft in der frühindustriellen Zeit," *Westfälische Forschungen* 10 (1957): 65; R. Engelsing, "Bremisches Unternehmertum," *Schriften der Wittheit zu Bremen* 2 (1958): 9-23; Beau, *Das Leistungswissen*, p. 48ff.; Kaelble, *Berliner Unternehmer*, p. 19f.
 31. Cf. the preliminary international comparisons in Kaelble, *Berliner Unternehmer*, p. 110ff. For evidence on the following paragraphs, cf. my contributions mentioned above in note 25.
 32. Heirs and founders of enterprises among Berlin entrepreneurs:

| | Time of takeover or foundation of enterprise | | | |
|--------------|--|------------------|------------------|--------------|
| | To 1835 (%) | 1835-1850 (%) | 1851-1873 (%) | Total (%) |
| Heirs: | 14 | 28 | 57 | 35 |
| Founders: | <u>86</u> | <u>72</u> | <u>43</u> | <u>65</u> |
| | 100 | 100 | 100 | 100 |
| No of cases: | 58 | 65 | 74 | 197 |

Source: Kaelble, *Berliner Unternehmer*, p. 55f.

33. Cf. H. Kaelble, "Sozialer Aufstieg in Deutschland 1850-1914," *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 60 (1973): 41-71.
34. The preceding remarks refer to the first phase of the German industrialization (up to the 1870s). Much less is known about the later decades. With this background, it does not come as a surprise that nearly all of those early entrepreneurs were male. In most of the nineteenth century, women had no access to the occupational posi-

were more than entrepreneurs emerged. Middle-class and lower-middle-class families did not prepare their daughters for independent careers in economic life. For most of the nineteenth century, there were no viable careers for women beyond the domestic sphere. The predominant male and commercial strategy discouraged girls and women from pursuing a career in business. It was not until the latter part of the nineteenth century that women with middle-class backgrounds could find work in the commercial and industrial sphere, usually as sales clerks, office workers, and secretaries, rarely in leading or self-employed positions. Certainly, there was the widow who continued the family business after her husband had died. There were some female entrepreneurs flourishing small-scale or medium-sized businesses, especially in commerce and related branches. In many cases women took part in the operation of family businesses. But the number of large-scale, established, and mature entrepreneurs on which the growing empire rested, were exclusively male. In the emerging entrepreneurial class of the nineteenth century, the female half of the population was largely absent. Cf. E. Hlawack, "Die Unternehmerin," *Die Frau in der deutschen Wirtschaft*, ed. H. Pohl (Weisbaden, 1985), pp. 127-146.

35 Cf. Pöckel, *Der Unternehmer*, pp. 281-98; W. Zann, "Unternehmertum und Kolonialismus in Deutschland," *Indium* 8 (1962): 241-54; B.F. Hoselitz, "Entrepreneurship and Traditional China," *Explorations in Entrepreneurial History*, 2nd ser., vol. 1 (1966), 36-49, esp. 436.

36 Cf. J. Soren, *The Failure of Liberalism: Essays in the Political Culture of Modern Germany* (New York, 1972), ix, 26-37.

37 Cf. H. Buchner, "Wendungen des deutschen Unternehmertums: a Deutschland von dem Beginn des 13. Jahrhunderts bis zur Mitte des 19. Jhdts," *Der Unternehmer*, p. 256ff.; K. Hübner, *Leben von Hermann Kohn*, 1923, ed. 3, pp. 153, 159, for the concept of a civil servant, even in 1870, for his son, a director of the Deutsche Bank ("My Son, the Kommiss").

38 In reality this relationship was much more complicated. Cf. J. Kocka, *Unternehmensverwaltung und Angestelltenverhältnisse am Beispiel Siemens 1817-1914: Zum Verhältnis von Kapitalismus und Bürokratie in der deutschen Industrialisierung* (Stuttgart, 1969), pp. 146ff., 171ff., 323ff.; C. Hübner, "Über militärische Einflüsse auf die industrielle Entwicklung in Deutschland," *Schmollers Jahrbuch*, 83/2 (1962): 397-409.

39 Cf. H.C. Cochran, "The History of a Business Society," *Journal of American History* 54 (1967): 5-12.

40 For more details, see Zunkel, *Der rheinisch-westfälische Unternehmer*, p. 66ff.; Kahlke, *Berliner Unternehmer*, p. 125ff.; H. Jäger, *Unternehmer in der deutschen Politik* (1956-1957; Bonn, 1967).

41 Cf. Pöckel, *Der Unternehmer*, p. 256ff.; Jüngling, "Deutsches Unternehmertum," p. 94; Buchner, "Deutsche Wirtschaftsentwicklung," W. Kellmann, *Industriestruktur der alten Länder im 13. Jahrhundert* (Tübingen, 1965), pp. 104-123; Lohmeier, *Der rheinisch-westfälische*, p. 66ff.; Rosen, "Die Märkische Unternehmerwelt."

42 Cf. the example of British entrepreneurship of the late eighteenth century in H. Koenig, *Die Entwicklung der Manufakturen und der Manufakturwirtschaft in Preußen* (Bonn, 1952), p. 242.

43 Cf. E. Soren, "Die Entwicklung von-kommerzieller Unternehmertum gegen auf das Unternehmertum und das Unternehmertum," in *Wirtschafts- und sozialwissenschaftliche Probleme*, ed. Fischer, pp. 247-84, esp. 277-81.

44 Hoselitz, among others, strongly stresses the role of marginal groups in early industrialization processes (B.F. Hoselitz, *Sociological Aspects*). Such notions usually go together with an implicit or explicit concept of the "normal" society as a rather static one. If society is perceived in a process of change, one need not search for the marginal group - as for a demer or machine - or for change started by innovation. At

least in the case of the European industrialization processes, the marginal group hypothesis does not lead very far.

45. Cf. G.A. Ritter and J. Kocka, *Deutsche Sozialgeschichte, 2: 1870-1914, Dokumente und Skizzen* (Munich, 1974), p. 322.
46. Cf. K.H. Manegold, "Das Verhältnis von Naturwissenschaften und Technik im 19. Jahrhundert im Spiegel der Wissenschaftsorganisation," in *Geschichte der Naturwissenschaften und der Technik im 19. Jahrhundert* (Düsseldorf, 1969), pp. 141-87, esp. 160ff. For an example of early nationalism (1830), cf. E. Dittrich, ed., *Lebensbilder sächsischer Wirtschaftsführer* (Leipzig, 1941), p. 134f.; R.H. Tilly, "Los von England: Probleme des Nationalismus in der deutschen Wirtschaftsgeschichte," in *Quantitative Aspekte der Wirtschaftsgeschichte*, ed. H. Giesch and H. Sauermann (Tübingen, 1968), pp. 179-96; L. Hatzfeld, "Der Anfang der deutschen Drahtindustrie," *Tradition* 6 (1961): 250 (n. 63); K. W. Hardach, "Anglomanie und Anglophobie Während der Industriellen Revolution in Deutschland," *Schmollers Jahrbuch* 91 (1971): 153-81.
47. Cf. note 25 above for evidence supporting the following paragraphs.
48. Cf. Dittrich, *Lebensbilder*, p. 250; H. Witt, *Die Triebkräfte des industriellen Unternehmertums vor hundert Jahren und heute* (Hamburg, 1929), p. 40ff.
49. Gerschenkron uses this expression to circumscribe the ideological stimuli he regards as necessary in relatively backward countries at the start of industrialization. Cf. note 5 above.
50. Protestants were overrepresented among early entrepreneurs. This was partly due to the fact that they were minorities in areas with greater business opportunities (such as the Rhineland and the Saar territory); from their minority situation, it followed that the traditional roads to wealth, respect, and power were closed to them, and this encouraged them to stick together as a group, in a way that was particularly well suited to the needs of long-distance trade and the business activities that went with it. Cf. W. Däbritz, "Führende Persönlichkeiten des rheinisch-westfälischen Wirtschafts- und Soziallebens," in *Wirtschaftskunde für Rheinland und Westfalen*, ed. O. Most et. al. (Berlin, 1931), p. 113ff.; Zunkel, *Der rheinisch-westfälische Unternehmer*, p. 29ff.; F. Hellwig, "Unternehmer und Unternehmungsform im saarländischen Industriegebiet," *Jahrbücher für Nationalökonomie und Statistik* 158 (1943): 402-30, esp. 412. The overrepresentation of Protestants among early entrepreneurs was probably also due to the content of their beliefs, in which economic success on earth was a token of salvation and grace. For the classic analysis, see M. Weber, *Die protestantische Ethik und der Geist des Kapitalismus* (1905) and idem, "Die protestantischen Sekten und der Geist des Kapitalismus," in idem, *Gesammelte Aufsätze zur Religionssoziologie* (Tübingen, 1920), vol. 1. It should be stressed that – contrary to Weber's thesis – no differences are visible in the behavior of Lutherans and Calvinists. Cf. Köllmann, *Sozialgeschichte der Stadt Barmen*, p. 109f.; Hellwig, "Unternehmer und Unternehmungsform," p. 412. For good figures on the church affiliations of German entrepreneurs: W. Stahl, *Der Elitekreislauf in der Unternehmerschaft* (Frankfurt, 1973), p. 206ff.; Kocka, *Unternehmer*, pp. 36-37.
51. As an analysis of these attitudes on the part of industrialists of the Rhineland and Westphalia: Zunkel, *Der rheinisch-westfälische*, p. 66ff.
52. Werner to Carl Siemens, 4 November 1863, in: C. Matschoß, ed., *Werner Siemens* (Berlin, 1916), vol. 1, p. 218; Witt, *Die Triebkräfte*, p. 45 (on Krupp).
53. See note 46 above.
54. Gerschenkron's evidence is restricted to economist and promoter Friedrich List. But List's representativeness can be questioned.
55. Cf. Hirschmeier, *The Origins*, p. 202ff.
56. See Gerschenkron, "Social Attitudes," p. 13f., for the general thesis that social values and expectations unfavorable toward entrepreneurs "do not emerge as a major retarding force upon the economic development of European countries in the 19th

- century." He bases this statement largely on Russia, but it is corroborated by the German experience as well.
57. Cf. Zunkel, *Der rheinisch-westfälische Unternehmer*, p. 182ff.; Zunkel analyzes how West German entrepreneurs retreated to their business activities after the failure of the liberal-bourgeois revolution of 1848/49, in which they had taken a strong part. While this tendency toward a separation of economic and sociopolitical power may originally have been a result of bourgeois defeat, most businesspeople accepted this pattern after 1870, since most of their demands in terms of national unity and economic policy were fulfilled by the political system of the newly founded empire, while the old class antagonisms between the feudal land owners and the bourgeoisie withered away, and a new one – between capital and labor – moved to the forefront. Werner Siemens's change from an oppositional liberal toward a business-oriented, politically adjusted supporter of Bismarck's state can serve as an example. Cf. Kocka, *Unternehmensverwaltung*, pp. 51-55. In general: W. Zorn, "Wirtschafts- und sozialgeschichtliche Zusammenhänge der Deutschen Reichsgründungszeit (1850-1879)," *HZ* 197 (1963): 318-42, esp. 40ff. Full of details for the period 1890-1918: Jaeger, *Unternehmer*. For the later period: K. Roseler, "Unternehmer in der Weimarer Republik," *Tradition* 13 (1968): 217-40. For the general context of this argument, cf. Hagen, *On the Theory*, p. 242.
 58. Redlich, *Der Unternehmer*, p. 322ff.; W.O. Henderson, "England und die Industrialisierung Deutschlands," *Zeitschrift für die gesamte Staatswissenschaft* 108 (1952): 264-94; S. Pollard, *European Economic Integration 1915-1970* (London, 1974), pp. 80-89.
 59. Cf. M. Schumacher, *Auslandsreisen deutscher Unternehmer 1750-1851 unter besonderer Berücksichtigung von Rheinland und Westfalen* (Cologne, 1968); Beau, *Das Leistungswissen*, pp. 37-45; Dittrich, *Lebensbilder*, p. 143ff., esp. 150ff.; D.S. Landes, "The Structure of Enterprise in the 19th Century," in *11e Congrès international des sciences historiques, Stockholm, 1960*, Rapport, vol. 5 (Uppsala, 1960), p. 121.
 60. P. Lundgreen, *Bildung und Wirtschaftswachstum im Industrialisierungsprozeß des 19. Jahrhunderts* (Berlin, 1973).
 61. Cf. O. Simon, *Die Fachbildung des Preussischen Gewerbe- und Handelsstandes im 18. und 19. Jahrhundert* (Berlin, 1902); F. Schnabel, *Die Anfänge des Technischen Hochschulwesens* (Karlsruhe, 1925); I. Mieck, *Preussische Gewerbepolitik in Berlin 1806-1844* (Berlin, 1965).
 62. Cf. Beutin, "Die Märkische Unternehmerschaft," p. 67ff.; Beau, *Das Leistungswissen*, p. 19ff.; Zunkel, *Der rheinisch-westfälische Unternehmer*, p. 69ff., 75ff.; Kaelble, *Berliner Unternehmer*, p. 60ff.
 63. Cf. Sachtler, "Wandlungen," p. 41.
 64. Cf. Kocka, *Unternehmensverwaltung*, p. 466ff.
 65. Thirty-six percent of all degrees were in engineering, 19 percent in law, 17 percent in economics, 4 percent in philosophy, 1 percent in other disciplines, and for 23 percent no definite information was available. Cf. H. Hartmann, *Education for Business Leadership: The Role of the German "Hochschulen"* (Paris, 1955), p. 18ff. Idem, "Die Akademiker in der heutigen Unternehmerschaft," *Tradition* 4 (1959): 133-48.
 66. Cf. J. Kocka, "Industrielles Management: Konzeptionen und Modelle in Deutschland vor 1914," *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 56 (1969): 354ff.
 67. Cf. For example: D.S. Landes, *The Unbound Prometheus* (Cambridge, England, 1969), pp. 340-8.
 68. I speak of "capital scarcity" in the sense of scarcity of savings ready for investment in industry (not in terms of absolute scarcity of savings). The establishment of German investment banks on a joint-stock basis around 1850 was influenced by French models, but then they developed their own patterns and perfection. Cf. M. Gehr, "Das Verhältnis zwischen Banken und Industrie in Deutschland seit der Mitte des

19. Jahrhunderts bis zur Bankenkrise von 1931" (diss. Tübingen, 1959); Landes, "The Structure."
69. Cf. L.H.A. Geck, *Die sozialen Arbeitsverhältnisse im Wandel der Zeit* (Berlin, 1931); E. Michel, *Sozialgeschichte der industriellen Arbeitswelt*, 3rd ed. (Frankfurt, 1953); J. Kocka, "Management und Angestellte im Unternehmen der Industriellen Revolution," in *Gesellschaft in der industriellen Revolution*, ed. R. Braun et al. (Cologne, 1973), pp. 162-201; Kocka, "Vorindustrielle Faktoren in der deutschen Industrialisierung: Industriebürokratie und 'neuer Mittelstand,'" in *Das Kaiserliche Deutschland*, ed. M. Stürmer (Düsseldorf, 1970), pp. 265-86.
 70. Cf. A.D. Chandler, Jr., and H. Daems, "The Rise of Managerial Capitalism and its Impact on Investment Strategy in the Western World and Japan," in *The Rise of Managerial Capitalism*, ed. H. Daems and H. Van der Wee (Leuven and The Hague, 1974), pp. 1-34. Chandler and Daems concentrate on American and English developments; they do not sufficiently take into account the dialectics between the relative modernity of firms and the relative backwardness of the economy at large. These problems are discussed in detail in J. Kocka, "Expansion – Integration – Diversification: Wachstumsstrategien industrieller Grossunternehmen in Deutschland vor 1914," in *Vom Kleingewerbe zur Grossindustrie*, ed. H. Winkel (Berlin, 1975), pp. 203-26; also see chapter 7 below.
 71. Cf. Dore, *British Factory*, for a stimulating comparison between Japanese and British industrial relations using the concept of "late development."
 72. The impact of Germany's bureaucratic traditions (which were, of course, pre-industrial in the sense that they clearly predated the start of industrialization) on the process of economic modernization and growth was largely positive and partly negative. Quite apart from the economic, social, and educational policies of the German bureaucracies (which were probably – on balance, and on the whole – more favorable than unfavorable toward industrialization), one must take into consideration the bureaucratic models, patterns, and values that found their way into private industry, facilitating the development of efficient management structures. However, in some cases this externally generated bureaucratization of industry (later followed by an internally generated process of bureaucratization) led to inflexibilities and over-rigid formalization that may have hampered economic efficiency and growth. Cf. J. Kocka, "Capitalism and Bureaucracy in German Industrialization before 1914," *EHR*, 2nd ser. 33 (1981), pp.453-468.
 73. Stressing some economic advantages of the relative economic backwardness of German industrialization, this paper has not considered its possible "social costs." What has favored economic growth may have hampered the liberal democratization of society and state, but this problem cannot be discussed here.



The Entrepreneur, the Family, and Capitalism

Examples from the Early Phase of
German Industrialization

The spirit and practice of capitalism emerged from noncapitalist structures and processes and were nourished by them for a long time. Max Weber illustrated this in his discussion of the relationship between the Protestant ethic and the spirit of capitalism. Joseph Schumpeter generalized it and stressed the importance of pre-capitalist elites for the emergence and maintenance of the capitalist order. Many others have taken up the same idea, developed it further, differentiated and supplemented it. It would seem appropriate to examine it with respect to the relationship between the family and (industrial) capitalism.¹

There can be no doubt that the basic principles of family life were in stark contrast to those of the capitalist market economy that became fully established in the course of industrialization in the nineteenth century. The relationships between members of a family were not, or hardly, regulated according to criteria of supply and demand, exchange, and competition. On the contrary, the family was held together by ties that differed greatly from the principles of a market economy: personal dominance and loyalty, partly due to natural inequalities and ties, partly to tradition, and partly to emotional relationships of the most complex kind. The claim of the capitalist-bourgeois system to offer its members equal rights and opportunities, to secure individual freedom, and to distribute opportunities according to individual performance was not par-

alleled by any similar claim on the part of the family. Family life tended to be informal and personal, while the market economy was highly formalized, quite impersonal, and, much more than family life, based on contracts. Families fulfilled many functions at the same time and tended to concern their members as whole persons with a multitude of attributes. In contrast, the market served very specific purposes and brought participants together only in specific regards, i.e. with respect to their roles as economic subjects. Considered in terms of their basic features, family and market represented – and represent – contrasting institutional patterns.

Although these characteristics appear most clearly in the middle-class family that began to emerge in the eighteenth century and became fully established in the nineteenth, some also are observable, occasionally in a weaker form, in families of an earlier age in other social groups, such as the nobility and the artisans in the early modern age. But I do not wish to go into that, or the genesis of this family structure, in more detail here.² We can take it that the middle-class family preceded industrial capitalism, which, with its main characteristics – private ownership of the means of production; private enterprise; decentralized investment decisions oriented to market conditions, competition, and profit considerations; wage labor; and the concentration of production in factories and mechanical processes – did not become fully established in Germany until the second third of the nineteenth century.

The main argument of this essay is that family structures, processes, and resources furthered the breakthrough of industrial capitalism and helped solve problems of (capitalist) industrialization which could hardly have been solved otherwise.³ In the first sections of this essay, I discuss how the family helped solve many of these problems and consider what qualities made the family capable of fulfilling economic functions of this kind. I then discuss some of the tensions that arose within the families as they became involved in the development of industrial capitalism and, conversely, some of the frictions that arose in enterprises as a result of their family ties. In the concluding section, I outline some of the results and sketch some of the changes in the relationship between the family and industrial capitalism after the first phase of German industrialization from the 1830s to the 1870s (the “Industrial Revolution”), which, with its precursors, is the main focus of attention here.

Motivation and Legitimation

It is not a matter of course, but for a successful process of industrialization it is necessary that a considerable number of persons who are capa-

ble of doing so should want to become entrepreneurs. Certain conditions will greatly facilitate this: the availability of economic opportunities, a shortage of alternative ways of achieving social and economic success, the weakness of legal barriers, and acknowledgment, or at least tolerance, of independent, profit-oriented commercial activity in the dominant scale of values. There was no lack of these conditions in Germany. In addition, a wide range of subjective motives can be established for the decision to found an enterprise or take one over in the early phase of industrialization: the desire for growing or regular profits to ward off a current or threatening need or improve one's living; the desire to work independently, be one's own master, to be able to create something or exercise power; and the intention to lead a righteous and proper life pleasing in the eyes of God.

Here I want to stress another motive which occurs frequently in the sources cited in this essay, although often interwoven with others: the desire to succeed as an entrepreneur, despite many obstacles, in order to help the family or needy relations. When, as frequently happened, a middle-class or lower-middle-class family was threatened with poverty or decline after the early death of the head of the household or both parents, the elder son often justified his decision to go into business by the need to care for his younger brothers and sisters who were not yet old enough to work. Alfred Krupp and Werner Siemens in the 1820s and 1840s are the most prominent examples of this.⁴

It is even more significant that after the firm was successfully established and material prosperity assured, the need for personal security well covered, and social recognition achieved, most entrepreneurs continued to work; they strove for expansion, struggled, fought, made sacrifices, generally until their heirs took over or until their death; in other words, they did what a quickly growing, industrial-capitalist economy needed them to do. Of course there were conditions that favored this, but – from the point of view of the individual entrepreneur – there was no compulsion. During those decades, a very pleasant “rentier” existence was one of many alternatives available to a person who had some property or state securities. Why did most of the entrepreneurs go on working, struggling, investing to expand? One motive occurs again and again in the sources: it was not primarily for themselves, but for the family, that the enterprise was to continue and expand. The family gave an added dimension and significance to the work. It was for the good of their children and grandchildren or – more fundamental and more abstract – for the family name, an imagined collective identity that stretched through several generations and on into the future. This not only justified the efforts the entrepreneur himself put into the business; it also justified his demanding that others – members of the family or

employees – should subordinate their individual interests to those of the firm, to a certain extent. Orientation to the family and its future development also enabled the entrepreneurs to take a long-term view and made it easier for them to renounce short-term speculative advantages. Entrepreneurs could organize their businesses in such a way that their businesses would probably survive them (making them more “objective” through the appropriate business regulations, changes in the legal form, and appropriate provisions in the will). The family united past, present, and future. It provided an important ideological base for the gradual emancipation of the business from the current needs of the founder and head of the firm. This process has frequently been observed in the literature on later managerial enterprises. As we see, it also occurred, although for different reasons, in family businesses in the first phase of industrialization. There can be no doubt of the economic efficiency of such a family orientation. Among other things, it served as an incentive and a legitimation for reinvesting a large part of the profit instead of distributing it for sustenance and consumption.⁵

Motivation and Qualification

Even if family advantage was not an explicit aim of the entrepreneur, and the desire for profit, ambition, or power and independence were the main driving forces, this motivation itself was a product of the family background. Accordingly, the upbringing and education provided by the family must be seen as a contribution to the emergence of the business. For a closer analysis of this, we should concentrate on the types of families from which the early entrepreneurs – nearly all male – emerged: first, craftspeople’s and artisans’ families; second, those of merchants and other tradespeople; and third, more and more, the families of factory entrepreneurs themselves.⁶ During the period under review (the first half of the nineteenth century), the lower-middle-class families (of master artisans and small retailers) were still often characterized by the integration of household and business. The children were brought up in the context of production and selling. Experience of real or threatening need, in the immediate family or among relations, was a formative experience for many a later entrepreneur who grew up under these circumstances, as was the experience of uncertainty, dependence on market conditions, and changing circumstances. These were the decades when the guilds were being dissolved or loosened, when pauperism was on the increase, and when capitalist principles gained influence on production. In these families, with their potential poverty or modest prosperity – good examples are the knifemaker Henckel, in Solingen, and the miller

Bienert, in Eschdorf in Saxony – the children were brought up in the intimate family circle, by their father (if he did not die early), by their mother, who was a strong influence and often made independent family decisions alongside the father, and, very important, by elder brothers and sisters. Grandparents living in the household are rarely mentioned. School, which a boy often left early to help in the business, played a smaller part. The influence of the family was intensive and lasted for a long time, at least in the artisans' families that still followed the old tradition. Even the apprenticeship, which a boy might begin at the age of 12 or 14, was sometimes in his father's workshop, though more generally he was sent to another master. Even so, his education and training until he qualified as a journeyman would be in a family: the family of the new master simply replaced that of his parents.

Still, it is clear that only a small percentage of these families produced entrepreneurs (although, conversely, nearly half of the first generation of industrial entrepreneurs came from the families of master artisans). And we may take it that the chance to rise to the position of entrepreneur and move beyond the traditional patterns of living and working of the artisan milieu, still oriented largely to traditional principles such as the honor of the *Stand* (position) and *Nahrung* (decent and sufficient livelihood), came to those sons whose upbringing had not exactly followed the traditional mode but had been driven somewhat off course by factors such as want, reversals of fortune, unfavorable market influences, the sickness or death of one or both parents, or simply unusual contacts. There is much to suggest that in times of change or want crafts families produced many who slid down the social scale; but they produced many entrepreneurs as well.

They educated boys and girls very differently, according to gender-specific norms and customs. In addition, girls had no access to apprenticeship positions, which continued to be defined and determined by exclusively male artisan and guild traditions. Gender-specific socialisation contributed much to the fact that the overwhelming majority of early industrial entrepreneurs was male.⁷

In this respect, the situation was not at all different in the wealthy merchant and trading families like the Schramms in Hamburg or in already-established entrepreneurs' families like the Schoellers or Carstans in the Rhineland. But here parents and brothers and sisters handed on much of the upbringing of the children to the nurse, the governess, and later the tutor. Still, the family influence was strong and intense in the early years, especially since, as it appears, uncles, aunts, and grandparents also played a part. School did not begin to compete with family influence until the later stages, and it was only after this that apprenticeship took the boy to a business associate's firm, that is,

further away from the parental sphere. Education for independence, for the search for new paths, orientation towards achievement and vision seems to have been frequent in the wealthier merchants' and in the early entrepreneurs' families, along with an equally strong obligation to the traditional sense of honor, middle-class solidarity, and proven forms of work. So the sons of these rising bourgeois families hardly needed to loosen family ties or break away from what they had been taught in order to achieve later success as entrepreneurs, as was sometimes the case in the artisan's world. In the biographies of the better-off bourgeois families we also find attention to the education of the girls, most of whom later married into commercial families. They were given thorough training in household skills and often a certain literary education and were socialized to their role of supporting their menfolk while taking a subsidiary position. They were prepared to become good housewives and mothers. They were also taught to help in the office or with the accounts before they married or if they remained single.⁸

So the field from which the first generation of industrial entrepreneurs were recruited – lower-middle- or middle-class families, most of them Protestant and engaged in small and medium-size businesses – was actually highly differentiated. But in every case the family was the strongest influence in childhood and early youth; this was the major factor in the later choice of occupation. There was always a strong integration of education and work; these children were indoctrinated at a very early age with a respect for independent work that was quite nonfeudal and that often had a religious dimension, independent work either as a means of earning an honorable living or as a satisfactory means of individual achievement in competition with others and in the battle against circumstances. Emphasis on the fulfillment of duty, on order and punctuality, was common to most of these families; the dominant position of the father was hardly questioned, and the children were expected to be obedient; if necessary, this was strictly enforced. At least in the commercial families of the middle and upper bourgeoisie this was combined, though often not without contradictions, with education to a sense of responsibility and independence. Permissive or indifferent, hedonistic or playful, culturally refined or intellectual, impinged with doubt or uncertainty, pessimistic or skeptical – family education for the first generation of industrial entrepreneurs was none of these. It was oriented right from the start and quite wholeheartedly to the sons' later economic activity. This was taken as a matter of course and generally desired. Certainly, in the merchant and entrepreneurial families it was assumed that one of the sons, generally the oldest, would take over the business. But it was not only the oldest who was seen as a future entrepreneur and appropriately motivated; the younger sons as well (though perhaps to a lesser extent),

especially in early bourgeois families, were expected to go into business. They would become partners in the family firm or – using their share of the inheritance and other help from the family – join another firm or open their own business.

On one hand, these early craft, commercial, and entrepreneurial families did not see themselves as a transitional phase that the children would soon leave to move into a noncommercial sphere. This was a rising class, optimistic, increasingly self-confident. On the other hand, there was still a considerable gap separating them from the leading groups in agriculture, the bureaucracy, the army, and cultural life. Unfortunately we do not have good quantitative studies of what occupations the offspring of these groups took up. Stahl established that 67 percent of the sons of a selection of successful founders of enterprises worked as entrepreneurs themselves; about three-quarters of these had inherited their father's business or a share in it, and the others worked elsewhere.⁹

This inheritance rate certainty can be regarded as high, and it was the result of not only the successful motivation of the male progeny but also other factors stemming from the family background and upbringing: specific skills and qualifications, for example. It is difficult here to separate the role of motivation from the role of qualification. Neither before nor after the first decades of the nineteenth century did the family make such a decisive contribution to the professional qualification of entrepreneurs. For the traditional means of acquiring qualifications outside the family on the basis of the guilds and corporations had been weakened by the liberal economic reforms of the turn of the century. State provision of commercial education and training in schools was developing only slowly, and markets for special skills and knowledge had hardly developed. It was still hardly possible to generalize qualifications and even less to build up theories about them – in the extreme case they were still closely guarded secrets – and hence they had to be handed on personally, through demonstration and imitation. All this goes far to explain the dominant role of the family in handing on qualification and training and hence in qualifying the first generation of industrial entrepreneurs.

The role of the family was particularly important in the provision of *technical* skills; this was especially the case for craftsmen's sons, who, when they became entrepreneurs, generally worked in the same industries in which their fathers (had) worked or in closely related industries.¹⁰ But the sons of great merchants also derived from their background the commercial qualifications they needed most: they absolved their apprenticeship in the offices of one of their relations, were sent on trips abroad, and were enabled to build up contacts; their first jobs were in the enterprises of business associates or friends, or they went into

their fathers' firms, first as privileged employees and later as co-owners. The influence of the family was even stronger in the case of the sons of manufacturers or factory owners, especially when they were regarded as future heirs. Their education was often specifically designed with the latter function in mind, carefully planned and varied to provide experience in many different departments of their fathers' businesses or in those of relatives or associates.¹¹

So what the early entrepreneurs learned from their parents' generation, mainly from their fathers and mothers themselves – in other words, what they acquired through family channels and not market mechanisms – gave them a tremendous advantage over other members of their generation when they had to compete, now generally according to market criteria, for access to enterprises or resources to found a business.

Capital Formation and Trust

If the laws of inheritance or provisions in a will did not introduce modifications, the same was true of money and property: what the parents' generation had achieved through work, performance, and favorable circumstances – often in market processes – was handed on to the children through non-market mechanisms, that is, within the family, and became an *ascribed* advantage for the new generation, to be used in market and competition processes of diverse kinds.¹²

The most obvious cases of inherited advantages are those who inherited enterprises. However, because during the Industrial Revolution industrial enterprises rarely developed in a continuous process from pre-industrial craft shops or manufactories, these heirs constituted a very small minority, albeit a rapidly growing one, among the entrepreneurs of the era. Kaelble has counted them in Berlin: among persons who had founded or acquired an enterprise in Berlin in 1835 or earlier, they accounted for 14 percent; of those who had done so between 1836 and 1850, they accounted for 28 percent; but 57 percent of those who joined the ranks of the entrepreneurs in Berlin from 1851 to 1873 had inherited. Altogether, every third entrepreneur in Berlin (as in Thuringia, from 1830/40 to 1870/80) had inherited the family business.¹³

Inheritance also played a large part in the establishment of new businesses, most of which were founded by the sons of master craftsmen or merchants. These persons usually could draw on at least a small inheritance – or they received a payment out of their future patrimony to help them acquire the initial capital they needed.¹⁴ This is one of the main reasons that, though they were not heirs to enterprises, the sons of independent craftsmen and merchants so clearly predominated in the early

generation of industrial entrepreneurs. It also is one of the reasons that individual "dynasties" in the commercial middle class proved so prosperous, lasting from the pre-industrial age through the first decades of industrialization and in some cases on into the twentieth century, even if they sometimes had to change enterprises, location, and occasionally even industry.¹⁵

Which was the most important – inheritance of money and property, or inheritance of qualifications and motivation – can hardly be answered in general terms. The situation was different for a smelting works (which cost between 200,000 and 300,000 talers around 1850), or a combined blast furnace and puddling works (1 million talers), than it was for a medium-size mechanical engineering factory (60,000 talers) or mechanized spinning works or weaving shed or a paper mill (15,000 to 50,000 talers).¹⁶ However, we know from a sample of nineteenth- and twentieth-century entrepreneurs that over the long term the sons and sons-in-law of owner-entrepreneurs became entrepreneurs much more frequently (89 percent) than the sons and sons-in-law of manager-entrepreneurs (only 21 percent). The majority of the sons of owner-entrepreneurs were heading the businesses their fathers had owned or headed, while only a minority of the managers' sons were doing so.¹⁷ Both types of entrepreneurs' families must have passed on very similar kinds of qualification or access to qualifications and "connections," style of living, and so on, but only the sons of owners would have inherited large amounts of funds or property. We do not know with certainty what occupations were taken up by those young men who did not follow their fathers' footsteps into industrial management; the results are only provisional as yet and not limited to the period of the Industrial Revolution. However, this example suggests that the inheritance of property and fixed assets was of greater importance in the assumption of an entrepreneurial position than the mere inheritance of qualifications and motivations.

Capital to found an enterprise, to operate one, or to expand one often was acquired by male entrepreneurs through marriage with the daughter of a wealthy family who brought a dowry and access to further credit facilities or – less frequent – through marriage of one's daughter to a man who had capital at his disposal and would perhaps come into the business as a partner. The social endogamy rate was high among the sons and daughters of entrepreneurs, and marriage ties between the great entrepreneurial families were many and intricate. Indeed marriage ties can be seen as family mechanisms of capital retention in wealthy families before joint-stock companies became generally established and modern company law developed. These ties counteracted the tendency inherent in the inheritance laws and practice to divide accumulated wealth.¹⁸

Even where there was no inheritance or dowry, or where these were inadequate or already used up, members of the family would often provide the capital needed to start a business, to finance the investment needed as a business developed, or to bridge the occasional bottleneck. That applied, in the first instance, of course, to the families of the owners or shareholders of firms who used their other income, their reserves, and their savings and, if necessary, were prepared to make sacrifices in their personal lives to enable the business to go on. It also applied to loans and deposits by brothers and sisters, parents and grandparents, brothers-in-law, uncles and aunts and cousins of all kinds. The literature and sources contain plenty of evidence of this. An American study has quantified this: between 1850 and 1880 in Poughkeepsie, New York, a medium-size trading town, 153 (61 percent) of 249 enterprises (with a value of at least \$1,000) had acquired their capital entirely or partly from relations of the owner(s), not including inheritances. It can be assumed that members of families in comparable German cases were no less involved.¹⁹

The forms of financial involvement varied, ranging from fixed-interest loans to deposits with a share of the profits. Sometimes a guarantee was enough. Generally the loan was granted without the creditor claiming co-direction or requesting a share in the management. Financial help from the family generally came with little reference to business conditions, or this did not play a primary role; the main motive was non-economic: family solidarity. Indeed, help from the family came even though, or because, normal cover was not available; it was given on the basis of personal trust. Nor was the money withdrawn if the business outlook worsened; close relations were prepared to help even when things seemed virtually hopeless. Many an enterprise survived the initial turbulent period only because it could rely on such assistance: financing that was provided independent of, indeed often in direct contravention of, capitalist rationality. As a whole, however, and over the longer term, loans from relatives were not given contrary to market rationale. They were rarely given without financial considerations, certainly not by distant relatives. If the recipient was consistently unsuccessful, there were requests for the money to be returned, sometimes again justified by family considerations.²⁰ Nevertheless, loans and deposits from relatives were of inestimable value as there were hardly any alternative sources of funds – there was no developed capital market, for example, nor were there a powerful banking system or joint-stock companies, and often the risk did appear to be too great for money to be lent according to purely economic considerations. Trust and loyalty, from a noncapitalist source, were essential.²¹ If he or she were not a member of a large family, the early industrial entrepreneur had a hard time of it.

Management

Family resources were also used to solve problems of industrial management that could not have been satisfactorily solved in any other way. Recruitment, motivation, and control of senior staff was a real problem for German entrepreneurs around 1850, especially in large companies with several plants that may well have been far apart. The careers and occupations of senior employees in industry were not yet clearly profiled. There was no developed market for managerial staff. The work of the senior "official" in an enterprise was complex, subject to rapid change, hard to standardize, and hence difficult to control with bureaucratic methods. It could be mastered only with a certain independence. Particularly during the years when an enterprise was being established, the owner was often away on long business trips. If there was no other partner in the business, the senior official had control. Employees in charge of a section a long way away from the center, perhaps even abroad, were particularly hard to supervise: the mail took a long time, there was no telephone, and travel was difficult.²² All this goes to explain why the entrepreneurs of the Industrial Revolution esteemed the loyalty and honesty of their staff as highly as its professional qualifications.

As far as possible, posts that entailed decision-making functions were given to relatives. Often the first person in an enterprise to be appointed and paid a salary was a brother or nephew of the founder, and the first manager was his brother-in-law or cousin. When the diversification of the production program created new management problems, the entrepreneur may have reacted by establishing a legally independent enterprise to produce the new article and putting a trustworthy (and not inefficient) nephew or son at the head of it. As far as possible, special work such as difficult business or research trips was entrusted to the son. In all these cases, business cohesion was intensified by family loyalty.²³ This helped make constant control and regulation at least partly superfluous and helped achieve necessary decentralization of responsibility and authority. In addition to contractual ties, financial interest, and the authority of the head of the factory, this form of extra-economic solidarity helped ensure a measure of cohesion and cooperation in the management of the enterprise and contributed significantly to the success that otherwise would have been hard to achieve in the initial period.

This applied, in particular, to the management of the early "multinationals." Coordination of the three branches of Siemens & Halske in Germany, Russia, and England was achieved largely through private correspondence and the trust between the three Siemens brothers, Werner (in Berlin), Carl (in Saint Petersburg), and William (in London). Each directed his branch without overfrequent reference to the others. The

loyalty of the brothers to each other was the business's cornerstone. Conflict broke out when one of the brothers left his branch or lost his influence for some other reason. These personal methods of coordination achieved only a loose connection between the individual parts of the enterprise, which remained largely autonomous. But as long as it sufficed, family loyalty was a very fine tool with which to achieve the goal – it was cheap and accessible.²⁴

Most of the early enterprises were partnerships. Relatives were preferred as partners, for partnership required trust and cooperation. In Poughkeepsie, New York, between 1850 and 1880, 48 percent of partnerships were between relatives.²⁵ There is nothing to suggest that comparable figures for German cities would be lower if we knew them. We do know that German entrepreneurs made their sons or sons-in-law partners in their business at a very early age.²⁶

Family relationships also facilitated cooperation between enterprises. They provided a basis for early cartel-type agreements. Carefully planned marriages between the sons and daughters of the great entrepreneurial families created a complex network of connections, establishing links that in those days could not have been created or maintained in any other way.²⁷

Connections and the Formation of a Class

It would be wrong to interpret the many marriage ties between the great entrepreneurial families as having only direct economic functions, the formation of capital and enterprises. Like the family relationships of the entrepreneurs in general, these ties also fulfilled important social functions, although these, too, were certainly of relevance for the businesses. It is sometimes overlooked²⁸ that, as a rule, the entrepreneur could not act as an isolated individualist or achieve success as a lonely genius. Of course a streak of individualism was needed – a desire for independence, an ability to look beyond what the majority thought, felt, and desired – in other words, a little distance. But more than anything the entrepreneur needed contacts. Since there was no highly developed school or publication system, he needed relations, friends, and acquaintances for an exchange of experience. Without a well-developed communications system, without a specialized press or special correspondents, without the experts in the business who later did nothing but collect information, the early entrepreneur needed personal contacts if he was ever to recognize certain kinds of business opportunities.²⁹ The low degree of institutionalization in the commercial and trading sphere, the weight placed on the person and his known and

acknowledged qualities in the granting of credit, the attraction of qualified staff and obtaining major contracts – all these required the entrepreneur to be known: not necessarily to the public at large but in a not-too-small a circle of people who were engaged in business and to whom he was known as trustworthy and reliable.

The entrepreneur of the Industrial Revolution also had to rely on other entrepreneurs in order to implement interests that could be represented only collectively, as in the context of state legislation and administration and increasingly in relationships with the workforce. We need only recall the customs legislation of the Vormärz and the early strikes, which by the 1840s, at the latest, had provoked collective reactions from the employers. But the means for collective representation of mutual interests were not well developed: older forms of the organization of joint interests (guilds, corporations) had weakened since the reforms of the turn of the century. New forms of organization (industry associations, employers' associations) emerged only slowly, and they took some time to grow in influence; it was not until the second half of the nineteenth century, and particularly after the 1870s, that they were really effective. Of course, there were no special schools for entrepreneurs. Up to the 1870s and 1880s, very few went to the universities, with their student fraternities. Only the mining sector, which had long been in state ownership, had its own academies. Nor did military experience count for much; in the Rhineland, military service was avoided as far as possible up to the time of the foundation of the Reich.

Besides church and communal organizations – and more than these – it was the family, in the widest sense, kinship and relations, that provided the social contacts necessary to fulfill these various needs. Networks of family relationships provided contacts that went beyond the individual entrepreneur and enterprise, loyalties and a sense of belonging together, that the business required but could not adequately supply.

A large number of children and a high endogamy rate were the most important prerequisites for the emergence of this family network. The great majority of entrepreneurs' sons married daughters of the middle and upper commercial classes, and a large minority or even a majority of entrepreneurs' daughters married sons of the same group. Five out of seven leading entrepreneurs in Leipzig in the 1840s had mothers who came from entrepreneurs' families; five of them in turn married entrepreneurs' daughters. Of seventeen leading businessmen's sons who married in Bielefeld between 1830 and 1910 (a random sample), twelve, a good 70 percent, married the daughters of businesspeople. Four of the seventeen brides were the daughters of public servants; one, in the Wilhelmine Reich, was the daughter of a landowner. Conversely, 65 percent of the daughters of Berlin entrepreneurs in the 1850s and 1860s married

into commercial families, most of them wedding the sons of merchants, factory owners, or bankers; the second-largest group was sons of public servants, ministers of the church, officers, and independent scholars.³⁰

Because marriage may have loosened ties to the parental family but hardly dissolved them, networks of relationships and loyalties were built up and could be mobilized when needed (to provide information or testimonies of character or for help in presenting a petition, forming business ties, supplying employees, or acquiring capital), especially since such assistance did not require much input or sacrifice on the part of the "son-in-law," "cousin," or "uncle" – the terms that commonly were used. In any case, the loose relationships would hardly have offered an adequate base for more.³¹

The marriage patterns also show how the middle and upper commercial classes cut themselves off from the lower classes or groups – manual workers and the lower classes in general, as well as farmers, small-craftspeople, and traders. On the other hand, they had little contact with the aristocracy or the major landowners, at least at first. Their marriage ties reflected and encouraged the formation of the bourgeoisie as a class. A more frequent move was into the educated middle classes. It was only in the later decades, in the Rhineland after about 1870, that more mobility developed in marriage between the major entrepreneurs and the single aristocratic families or major landowners, in keeping with the process of some assimilation between the bourgeoisie and the old ruling class. But this assimilation did not get far.³²

The marriage patterns of the commercial bourgeoisie would need a closer examination. Here I can only point out that with the geographical expansion of markets and commercial activities the geographical range of the potential marriage market also expanded. The rather local limits of the seventeenth and eighteenth centuries widened, although strong regional accents remained even in the nineteenth century.³³

The mutual preference of two or three commercial families in marrying their offspring has frequently been shown, especially in the eighteenth century. P.E. Schramm has described how, in this way, three wholesale firms in Hamburg grew together to form a "business clan." Between the Krefeld silk manufacturers von der Leyen and the Cologne bankers Herstatt, there were five marriages in two generations in the late eighteenth and early nineteenth centuries and, of course, intensive business relationships.³⁴ These strong interrelationships suggest careful marriage strategies observing economic considerations as well as family interests. They seem to have become less frequent in the nineteenth century. In the same way, it can be seen that what had been a frequent conjunction of marriage and industry³⁵ became rarer, especially in the textile industry. Both developments suggest that in the course of the nineteenth century the social and

only indirectly economic ends and functions of these networks of relations – contacts, loyalties, information, collective interests, the emergence of supra-regional groups or class cohesion – moved into the foreground and the direct economic aims (capital concentration, the integration of firms on family bases) became less important.

These family networks were not sharply delineated. They were relatively unstructured and flexible. In the case of the Krupps, for instance, contacts with the big families with whom there had been close ties in the eighteenth century were largely broken off by the 1820s but an important new network was being created through new marriages.³⁶ Business clans of this kind, and prominent groups linked by many intermarriages and interrelationships on the local level, could take in “new blood” if it appeared economically and socially necessary. Often, co-optation into a family (sometimes the way was prepared by an entrepreneur acting as godfather) was followed by economic success.³⁷ On the other hand, the family dimension meant that it was not possible for ties to be fully accepted on the grounds of economic success alone and that economic success and social standing – in cities like Hamburg and Barmen, political power as well – generally went hand in hand.³⁸

It was more difficult to get rid of members of the clan who were not pulling their weight. In this respect, the market mechanism, if left to itself, might have been more effective. Not even major Hamburg merchants always succeeded in getting rid of a ne’er-do-well son by dispatching him to Surinam. It would appear that these families were very reluctant to disinherit. It was occasionally done and then justified by the need to protect the inheritance of the grandson.³⁹ But generally disinheritance discussions went no further than threats. Clearly disinheritance, had it been done more often, would have caused uncertainty and rancor, jeopardizing family solidarity and perhaps the basis of the whole system.

The Particular Qualities of Entrepreneurs’ Families

It has been argued so far that mechanisms inherent to capitalism clearly were not sufficient to solve early-industrial entrepreneurial problems and hence to establish industrial capitalism. Along with other precapitalist structures, processes, and resources, the family played a considerable part in solving the business problems of the early industrial age. In many respects, family loyalty, energy, and resources functioned, if not as a motor, then as a vehicle of early-industrial capitalist development.

The next paragraphs are meant to demonstrate that the families of the early industrial entrepreneurs that fulfilled these functions, in part consciously and deliberately, but in part unconsciously and uninten-

tionally, were *a form of transition* between the traditional “household,” with the business and family under one roof, and the modern “middle-class family.”⁴⁰

On one hand, the families of early-industrial entrepreneurs differed from the traditional farmers’ and master artisans’ families or those of the cottage workers in that the household and business were largely separate, a necessary consequence of the centralization of production that became established with the breakthrough of industrialization. For the family this brought a certain relief: there was no pressure, for instance, to fill all the family roles: the widow or widower could afford, if they wished, not to marry again.⁴¹ The separation between household and business brought new opportunities and created qualities that had not been so strongly marked in the old farming or petty bourgeois households. For the entrepreneurs of the Industrial Revolution, marriage and the family created a protected, private sphere, in which moral self-realization and emotional satisfaction were possible and “homely” pleasures could be enjoyed because the family was at a distance from the struggles of the business world and the storms of public life. Generally, a young couple set up home immediately after marrying, even if the parents of one of them were in the vicinity and could have housed them. And if the son who married last did not leave the parental home and a widowed mother, the rooms and floors were carefully divided: the young family needed, and was given, private quarters. The home was to be a secure refuge, where the “pains of the knocks and blows could be forgotten,” a nest, from which the husband was repeatedly torn by “the inexorable demands of business” but to which he regularly returned to gather new strength.⁴² However idealized and romantic this concept may have been, the reality for the factory owner around 1850 was less a contradiction to it than the reality for the master artisan family traditionally had been and still was. The wife of the entrepreneur usually did not take full part in her husband’s business life as the farmer’s wife, the master artisan’s wife, and the cottage worker’s wife often did. Nor did the children have to work in the business; they grew up in the home, not in the workshop, even if in the first decades the factory owner’s home was near the workshop, often on-site, and only later, when the villa became attainable, in another quarter of the town. The husband’s co-workers did not belong to the household or to the family. When housekeeping books were kept, they were entirely separate from the firm’s.

On the other hand, as we have seen, these families fulfilled many economic functions; their separation from the production and business sphere was not as marked as that of the public servant’s family and certainly not as marked as that of the modern, twentieth-century nuclear family, which serves primarily reproductive, socialization, consumption,

and leisure functions. However, a family could fulfill these economic functions only if it had certain qualities inherited from the past. These have hardly been systematically researched, and here I can only give a few impressions and assumptions:

(1.) Only larger families could make the contributions to the management of enterprises and the formation of a social network outlined here. In capital formation, larger families were more likely to be able to help than smaller – and the families of most entrepreneurs were large. Four to eight children was the norm among seven leading entrepreneurs in Leipzig in the 1840s.⁴³ Johann Gottfried Henckel, knifemaker and merchant in Solingen (1735-1811), was one of nine children of a father who himself had five brothers and sisters. Johann Gottfried founded his business, a supra-regional trade in metal goods and, although he married again a year after the death of his first wife, had “only” four children. Of the two sons who carried on the business, one remained unmarried and childless, a rarity among entrepreneurs to the present day,⁴⁴ while the other, Johann Abraham Henckel (1771-1850), had eight children, among them three sons, one of whom died as a boy. The main heir, Johann Abraham (1813-1870), had fifteen children. Ten of them, some still living in the twentieth century, produced thirty-one offspring.⁴⁵ In a study of the “*Deutsches Geschlechterbuch*” (genealogy records) for Lower Saxony, Adelheid von Nell has shown that between 1750 and 1849 the families⁴⁶ of major entrepreneurs and merchants had an average of 5.9 children and hence already surpassed the average family in the educated classes and the commercial petty bourgeoisie. It was not until about 1850 that this figure declined, slowly at first and rapidly after 1900.

(2.) Loosely tied and unstable families could hardly have fulfilled the functions we have outlined. The early-industrial entrepreneur family in the narrower sense, the family that lived together under one roof, held together firmly. We can recognize four major reasons, four characteristics of these families, three of which are traditional and only one modern. First, one should stress the dominance of the father. These families had a clear center of decision making, and this was also the firm’s center of decision making. It was a dual role, the two aspects mutually supporting. As his family ties helped the entrepreneur in directing his firm, so his business influence helped the father in governing the family. He decided on the appointment of staff, the allocation of shares; he gave recommendations and made careers. Above all, he also decided – within broad legal limits – on the distribution of the patrimony. Tradition and custom supported his authority, as did ideology. And as long as political power in the public sphere was largely limited to the heads of household (usually male), this also furthered the patriarchal, autocratic structure of the family. Hence, the head of the household and director of the firm was

powerful enough to determine the use of family resources within the limits set by law, tradition, and custom. Certainly he decided on the education of the children, whether relatives should live in the house, and, probably, what servants should be appointed. He influenced the choice of occupation and marriage partner in the younger generation within limits that, admittedly, were shifting. He kept the family together; he brought up his children in this attitude of mind; he was generally powerful enough to enforce conformity to these ideals even against opposition. He did this from firm conviction and probably because he knew how well a properly functioning family sensed his dual role as head of the household and of the firm. The family was far too important an element in this complicated structure of personal, business, and social relationships to be left to itself. If necessary, it was held together with pressure. The scope for individual members was very limited, and there was little room for nonconformism. The family as a unit ranked before its individual members, who of course took very unequal parts in the definition of its aims. Generally the husband could rely on full support from his wife; he rarely encountered competition or criticism from her – for her position, self-awareness, and satisfaction depended on family relationships to an even greater extent than his. It would appear that during these decades the more the old links between the business and the family were broken, the more dependent and less influential women became. The housewife moved away from the world of business and work, without yet having full sovereignty in the house and the family.⁴⁷

The second characteristics that held these families together was that they had a multiplicity of functions. This multiplicity gave the family a central place in the thoughts and feelings of its members and supported a collective identity that went on from one generation to another. We have already considered some of these functions, particularly the economic and educational. There were many others. Religious observances were often largely in the family circle. Social life and games, music, and other leisure pursuits were preferred at home. Family occasions such as marriages and christenings were great celebrations in the old middle and upper bourgeois families. On a wedding day the father might try his hand at writing a poem, or the children would put on a play.⁴⁸ There were very few alternative means of entertainment – the father had access to some, but generally these were much less highly developed than later, and this lack of outside attractions strengthened the family.

There was a shortage of alternatives in another respect as well. The belief must have gone very deep that in cases of individual misfortune or failure one could expect help only from the family. Only the family would rescue a member from ultimate failure. In cases of bankruptcy

and sickness, after accidents or the misfortunes of war, the family came to the victim's aid as best it could.⁴⁹ Particularly during the first half of the nineteenth century, there were hardly any other forms of protection or insurance, apart from the church and communal relief for the poor, and this must have seemed to most "respectable citizens" a nightmare rather than a support.

Since the reforms of the turn of the century, guilds and other corporate institutions had been weakened and in some cases destroyed; new self-help institutions were emerging only slowly; public insurance systems were not set up until the late nineteenth century, and even then they did not include the bourgeoisie. One has to consider, however, whether during the first half of the century closely tied minorities, especially religious communities and sects, did not develop a solidarity similar to that of a family – perhaps even better – in providing a degree of protection and insurance, in that they, too, formed social networks and helped solve economic problems like those discussed above.⁵⁰

Patriarchal authority and multifunctionality had strengthened and stabilized the middle class, farming, and noble families for many generations. A third element now developed: it was in strong contrast to the two others and, if not entirely new, gained in importance with the increasing separation of the household and the enterprise and the still very limited iteration of family life that this brought. It was the romantic, idealized, and emotional attitude that began to characterize the concept of the family, at first in the educated classes, then invading the entrepreneurs' households as well. The sources are scarce and seldom clear: how much is the expression of genuine love and affection in these families, and how much is rhetoric, unthinking adoption of current modes of thought? What were the survival chances for delicate emotions in these multifunctional family groups, still with so many objective obligations and ties, in the early bourgeoisie? There are a few instances to suggest that the chances were not lacking and that they were increasing rather than decreasing. Love and affection between affianced and then married couples, between parents and children, above all between brothers and sisters, formed ties that often bound members of a family more closely than the authority of the father or the force of contingency; but at the same time they brought greater individualization and might stand in the way of the rationale or family sense that transcended the individual and the individual's needs.⁵¹

For the families could exercise the functions outlined above only if their identity consisted of more than the sum of their individual members, if there was a family sense that went beyond the happiness of individuals and to a certain extent was held to be superior to it. Only in this way could the family fulfill the legitimization function described above;

only in this way did it serve as motive and reason for a decision not to consume but to accumulate. In fact we find the traces of such a supra-individual family sense in our sources. Werner Siemens, by then a successful entrepreneur, wrote in a private letter to his brother of his long-time intention "to found a lasting firm, which perhaps one day, under the leadership of our boys, could become a world firm like Rothschild etc., and bring our name to the notice of the world." And he concluded, "The individual must be willing to accept personal sacrifices for this great plan, if he thinks it a good one."⁵²

Particularly in the older, very self-confident commercial families, which have sometimes been compared with "dynasties," we might well find the beginnings of an emphatic, supra-individual family sense, transcending generations. And in fact these families did plenty to encourage this. This is the fourth factor that favored strong family cohesion. Again we can take the Siemens family, although they are rather an ideal and hardly representative example. When the firm of Siemens & Halske was founded in 1847 the family already had a "carefully and faithfully recorded family tree" going back through eight generations to the time of the Thirty Years War. The record was first drawn up in 1829 and was revised and supplemented several times in the following decades. The family had a coat of arms and a motto. After 1873 family reunions were held regularly, at least every five years; generally there were more than fifty and sometimes more than a hundred persons present. In the same year a family foundation was set up, its purpose "to give every member of the family of Siemens the possibility of proper education, both physical and intellectual."⁵³ Later family bulletins were issued (after 1905) and a family archive was set up in the old family home in Goslar (in 1931), where a Siemens library was also assembled, complete with biographies of the more distinguished members.

Of course one cannot generalize from this. Nevertheless coats of arms and seals were frequent among the larger commercial bourgeois families. The older members of the wealthier Hamburg merchant families regularly had their portraits painted so as to leave a better record for posterity; later they were sometimes content with photographs. The family Bible was handed on from generation to generation, and major events – births, marriages and deaths recorded in it with a respectful commentary for the benefit of future generations. The use of the same Christian names through many generations also symbolized and strengthened the family tradition, as did the early tendency to keep written records. Sometimes there were even rather legendary accounts of the family's origin.⁵⁴

(3.) Where such a sense of family tradition and identity was at work, transcending individuals and generations and reminiscent of the behavior patterns of the nobility, it certainly furthered the cohesion of the

immediate family circle, the single household, but at the same time pointed beyond it. Many of these families could fulfill their economic functions only because they were not totally absorbed in their own small household but found part of their identity in more distant kinship relationships.⁵⁵ These of course were much looser than those of their immediate circle; they may have remained latent for years but could be actualized in case of need – within clearly recognizable limits – for the solution of problems. It was only in exceptional cases that the family in the wider sense, the kinship group or “clan,” had a clear focal point and center, and even so this could never develop the power and authority that the father exercised in the individual household. There were no clear external limits to these wider circles of relatives; indeed they changed according to the standpoint of the individual household concerned. That is also the reason why it is difficult to reconstruct them. Strong love and affection between their members probably were rather rare, with a few important exceptions, such as closer relationships that may have existed between brothers and sisters who had then founded their own families. What kept these “clans” together in such a way that they could function as described?

It is tempting to argue somewhat in a circle: the multiplicity of functions in view of the lack of feasible alternatives. How else could networks of familiarity have developed? How could the immediate family help an individual in need if it was not itself part of a greater circle that offered protection and a distribution of risk? Also, there were few means of reducing unfamiliarity outside the direct circle in those times. Maintaining kinship ties, then, would seem to be a most natural strategy. Anyway, since the education process was so closely bound up with the family, since marriage partners were so consciously chosen, stressing the trend to social endogamy, kinship relationships meant much more than they mean today: usually the same religion, similar values, a similar style of living, and similar origins.

The tendency of families to cling together even in their outer circles was also strengthened by the tendency of the old entrepreneurial families to stay in one place. In the old industrial areas, there was little geographical mobility among the entrepreneurs.⁵⁶ Relations living in the same place, if not in the same house, met frequently, even if this did not apply to all of them. “Many entrepreneurs’ families had evolved a custom of meeting once a week. The Möllmanns’ family day was Sunday, the Baums’ Thursday. Friedrich von Eynern and his young wife Emile Rittershaus had to devote virtually every other day, and very certainly every Sunday, to the family.”⁵⁷ During journeys, relations were visited; indeed, people traveled, as they said, “down the cousins’ road.”⁵⁸ At the same time, of course, many a household, many a sister,

cousin, or uncle may well have withdrawn from the network, refused closer contact, and ignored the family bulletins. The system was flexible enough to go on functioning.

Tensions

These particular qualities will show how the narrower and wider family circles of the industrial and commercial bourgeoisie could exercise the economic functions outlined above as frequently as they did. The families had maintained sufficient *traditional features* to be able to perform these functions, as the old *ganze Haus*, with the enterprise and the family, servants, and apprentices under one roof could do. Among these traditional features were: a large number of children; the patriarchal authority of the father and head of the household in the closer family circle; the tendency to inherit an occupation and enterprise and to social endogamy; the widespread network of kinship relationships with which the smaller units were surrounded; the creation of a family identity that went beyond individuals and generations; and the importance of the multifunctionality of the family in view of the lack of alternative resources or institutions provided by the market or the state.

On the other hand, these families constituted a *new element* in their environment. They were not supporting a craft shop, as in the pre-industrial age, or a farm that was largely self-sufficient; theirs was an industrial enterprise, functioning (or not functioning at all, as the case might be) according to capitalist laws, expanding, centralized. As middle-class families, they tended to be self-determinant, following their own rules and at some distance from the new economic rationale.

This basic tension caused ongoing friction: either the needs of the enterprise infringed upon the principles and rules of the family, or the claims of family life threatened to disrupt the rationale of the economic sphere.

In the craft families in the eighteenth century, a marriage that was economically and socially "desirable," and as such planned and determined by the parents, may not have conflicted much with the ideals and desires of the couple itself.⁵⁹ The ideal of marriage as a self-determinant partnership possible only on the basis of love that became established primarily in the middle classes, by the Vormärz, at the latest, was not in keeping with this type of "marriage of convenience." But was not the instrumentalized marriage of convenience an essential part of the family network and its economic and social functions? No doubt there were increasing conflicts between the "rational" marriage policy and young people's desire for wedded bliss in the new style. No doubt some marriages were a sad contrast to what they claimed to be, full of inner con-

flict and compromise, tension and hypocrisy, a continuance of the old split between love and marriage that the younger generation was fighting against. What did this mean for the inner credibility of the family, which the popular encyclopedia of Brockhaus described in 1834 as "sacred" and which so frequently was praised and celebrated as a private sphere free of conflict and instrumentalization?⁶⁰ Did the economic and social function it served not, in turn, affect the family in such a way as to weaken its substance and hence erode the basis on which it could serve those functions? The sources are very discreet in their treatment of this inner core of modern family life.

However, the marriage policy of the great entrepreneurial families was at least slightly adjusted to the new ideas. We have already pointed out that although the tendency to social endogamy did not decline, there was a slackening of the tendency, so frequent in the eighteenth century, to form dynasties by frequent intermarriage between two or three families and to marry within the same industry or branch. It would appear that the economic aspects of marriage gave way more to the social functions, which suggests that the choice of marriage partner was less frequently the result of a deliberate family strategy than the result of existing social contacts, friendships, and arrangements. Within these limits, the couples would have been able to choose freely, guided not first and foremost by the business policy of their families' enterprises, even if they did regard a "suitable" marriage as important, welcomed a dowry, and generally regarded parental approval as essential. Of course a marriage partner had to be suitable – not only socially and economically but in religion as well, and this itself was a restriction on purely economic considerations. This is hardly surprising in view of the great weight placed on religion in everyday life and the attitudes of the early entrepreneurs. We do not often find an entrepreneur's son marrying hastily for love; the flower girl, the hireling's daughter, the young girl in the factory would not have been considered. In any case, the son of an established merchant or entrepreneur did not marry in the first full flush of passion. He generally married late, later than the sons of petty bourgeois families or the educated classes and certainly later than the members of the lower classes: at 33, on average, between 1750 and 1849, according to A. von Nell's survey in Lower Saxony. However, these young men generally married very much younger women, age 22, on average.⁶¹ The sons of the Bielefeld bourgeoisie in the nineteenth century likewise tended to wait until their thirtieth year before marrying women who, on average, were 22. According to another more comprehensive study, 22 was roughly the age at which entrepreneurs had finished their education and training at school, in apprenticeship, and in dependent employment and for the first time could take independent control of a business.⁶² So the sons of the bourgeoisie concentrated on

their business training for a relatively long time. They did not marry until they were economically and occupationally established.⁶³

Still, there remained an element of calculation in the choice of a partner. No doubt there were marriages purely for money and cases where the father dictated the choice to his heir. And families certainly would have tried to prevent economically less desirable marriages and – as in one example – to keep possible suitors away from the wealthy aunt or the niece who would inherit and who was thought not to be of the soundest intellect, even going to the point of appointing a trustee.⁶⁴ Generally, however, marriage was not calculated like a business investment or transaction. Rather, the sources give the impression that increasingly the sons – more than the daughters! – had room for independent initiative and made good use of it. However, they, too, kept within clearly defined limits, marrying only after careful consideration of all the aspects involved and in consultation with their parents or an uncle.⁶⁵ The reality was *somewhere* between a love match and a marriage of convenience, and no doubt there were strong variations.

But the world of business penetrated the family sphere in other respects as well, causing changes, tension, and “costs.” The father influenced the sons’ choice of occupation and often maintained his will over theirs.⁶⁶ The eldest son or at least one of the sons generally had to submit to the requirements of the family business⁶⁷ and systematically prepare himself – like the crown prince – for succession. This may well have been a heavy burden if it forced the young man contrary to his inclinations and ability. If there were several sons, this lessened the likelihood of conflict. The most suitable son could then be chosen.⁶⁸ These bourgeois families were certainly flexible enough to do that; unlike the nobility or the landowners, they did not have fixed rules of inheritance, and this made them economically much more viable. A son-in-law or nephew could come into the business if there were no son or the sons were conspicuously unsuitable. Adoption apparently was rare. But we do not know what conflict or heartache the question of the inheritance may have caused within the family.

Only closer analyses of the inheritance and dowry practice, and of marriage policy in general, would show whether the choice of an heir who seemed most suitable to take over the business and the priority accorded to business interests was purchased at the expense of other sons and daughters, as it was, with the appropriate variations, in the case of noble families.⁶⁹ Certainly, handing on to the next generation proved a vulnerable point. Generally it would have been more in the interests of the business to maintain the accumulated capital (rather than distribute it) and not to set too many successors at its head, even if they were equally entitled to be there, but to make the best qualified the head of the firm and

the overall successor. But this often conflicted with the principles of justice and loyalty within the family. There is Berdrow's rather restrained account of the delay in handing over the steelworks to Alfred Krupp in 1848, which must have put family feelings to a hard test and left at least one permanently damaged victim: brother Friedrich, out-bidden, who left Essen, going into virtual banishment, becoming more and more a strangeling, even if financially secure. There are other cases of dispute between the mother and children after the death of the father who had headed the business.⁷⁰ Generally an enterprise does appear to have been left to more than one person.⁷¹

The entrepreneurs of the Industrial Revolution, whether they founded their businesses or inherited them, appear to have been familiar with the dilemma of having to choose between the interests of the firm and loyalty or fairness to the closest members of their family. They resorted to various means to cope with this, sometimes handing on the business during their lifetime, reserving to themselves a regular income and a certain right of participation on matters of principle. Sometimes they founded or bought additional works in order to be able to leave one to each son,⁷² though this was hardly possible in very capital-intensive industries. Sometimes they distributed shares to their children, imposing the condition that these could not be taken out of the business for some time, and not granting full co-direction rights to prevent the number of managers growing to the detriment of efficiency, but leaving the direction of the enterprise to the person most suited. This is the beginning of a separation between shareholding and control in a family business. Some of the wills and contracts were very complicated.⁷³ But over the longer term it was not always possible to prevent heirs from claiming their full shares in the form of cash or too many or unsuitable heirs from demanding participation in the direction of the business.⁷⁴

The only safe possibility was to change the firm's legal status, a solution that became increasingly popular even during the Vormärz. The form chosen was that of an *Aktiengesellschaft*, or *Kommanditgesellschaft auf Aktien*; in 1892, the legal form of the "Gesellschaft mit beschränkter Haftung" (limited-liability company; GmbH) was created, providing a solution to the particular needs of the family firm.⁷⁵ Even if the old family business often continued for a long time under the new guise, these changes did constitute an important step on the way to the gradual withdrawal of the business from the family context that was becoming increasingly necessary through the growing irreconcilability of family and business interests.

Testamentary or contractual arrangements regarding inheritance and succession or changes in legal form, as well as the arrangements that frequently had to be made between brothers and relations concerning

capital participation, profit-sharing, and business rights and obligations of various kinds – these meant that formalized contractual aspects penetrated deep into family relationships, where they perhaps constituted a certain alien element, changing one dimension of family life, institutionalizing it, and making it more “fixed” in order to better meet the requirements of the business.⁷⁶

Of course, the conflict between the claims of the rapidly growing business and the family could also negatively affect the course of business, hindering efficiency. If the owner of a factory had many sons and daughters and wanted to give them all fair shares, the inheritance could prove a considerable burden on the enterprise,⁷⁷ with shares in the capital to be handed out or current earnings distributed, unless it proved possible to establish a family or business interest that was accepted as superior to the claims of individual heirs or to find other ways of avoiding distribution.⁷⁸ For this reason crises over inheritance were frequent in family firms.⁷⁹ Such crises could also arise over the problem of selection of the management. Recruitment of the successor (or successors) into the management of the business was primarily according to family criteria. But although an entrepreneur’s son may have had all the advantages we described earlier in terms of upbringing and experience, this did not always guarantee that he would prove efficient at the job. If he were not, the business, which was still very dependent on the personality and ability of the head of the firm, could easily weaken or even disintegrate.⁸⁰ So dependence on the family could negatively affect the efficiency of a firm. Nor, apparently, was it always easy to prevent heirs who wished to do so from participating in the management. On the other hand, the factories of the Industrial Revolution rarely could be divided without seriously impairing business efficiency. This caused considerable coordination problems, as when seven members of a family wanted to take an active part in the direction of a small Düren textile firm, each claiming to represent the enterprise.⁸¹

Even recruitment of members of the family to work below the management level could prove problematic. Of what use was the most loyal of men if his technical qualifications and general efficiency were not up to the job?⁸² Moreover even in the early period it could happen that quiet, restrained growth was preferred due to family considerations, and many a chance to expand was not utilized because it would have made capital and staff from “outside” necessary, which might have jeopardized the family influence.⁸³

Conclusion and Outlook

In spite of these tensions and obstacles, it is clear that in the first decades of German industrialization the family was one of those non- and pre-

capitalist institutions that were a prerequisite, stimulus, and vehicle of the process of capitalist industrialization. It is hard to say how this process could have gone on without these families and their resources. Family structures and processes furthered capitalist industrialization much more than they hindered it. Sense of family proved a strong motive to entrepreneurial behavior. The desire to serve family interests, which were perceived as going beyond the individual and one generation, provided an ideological legitimation and in some cases motivation for growth-oriented entrepreneurial policy. Through "inheritance" of knowledge and skills and social benefits of many different kinds, the family, more than any other institution, helped qualify the early entrepreneurs. The family made many a contribution to capital formation, and its financial resources were of major importance. Family relationships helped solve early management problems; they served to provide information, created trust, furthered cohesion, and created a sense of class in the emergent middle class. They provided contacts that could be used for many purposes and created a sense of belonging that facilitated entrepreneurial success. Other functions these families performed we have not been able to discuss here, such as their role as models and ideology for industrial staff policy and administration: much has been written on this under the heading of "patriarchalism." Some of these functions were more dependent on the immediate family; some, on the more distant circles of kinship relationships.

We have put special emphasis on two of the prerequisites for this major contribution that family structures and resources made to the development of early industrial capitalism. First, there was the poor state of development of viable alternatives: in the first two-thirds of the nineteenth century, neither the market nor state institutions were sufficiently developed to be able to solve the central problems of early enterprises. Recourse to the family proved a viable, and sometimes the only, solution. Second, the economic functions of the family can be explained through its structure and position in strategically important sections of the commercial bourgeoisie. No doubt some family structures were less favorable to the process of capitalist industrialization.⁸⁴ This essay has made only a preliminary contribution to research on the – generally traditional – characteristics of entrepreneurs' families that enabled them to take on these economic functions. The entrepreneur's family has been described as a transitional phenomenon between the *ganze Haus*, with the business and the family under one roof, and the middle-class family of the modern type. This duality led to tension between some of its tasks and functions, on one hand, and its claims and aims, on the other – tensions ultimately stemming from the principal structural difference between the family and the market outlined at the beginning of this essay.

We have discussed some aspects of the relationship between the family and capitalism in the early phase of industrialization. During the following decades, this relationship changed; it became looser and its dysfunctional elements became more pronounced. We can identify three complex processes of change responsible for this:

First, at a more advanced stage of development, the industrial economy needed help from the family much less than in its initial phases. Public institutions increasingly were taking over the function of educating and training the entrepreneur. The capital market was becoming developed; with the help of the banks and modern company law, new, nonfamily means of financing were being opened up. With more efficient methods of industrial management, recourse to family relationships was needed less and less. Cartels and groupings with formalized, more and more bureaucratic, structures were making the family less important and sometimes old-fashioned as a basis for the formation of enterprises. The means of communication were being improved. The family and more distant relations remained important for the establishment of social cohesion in the group of leading entrepreneurs; but now there were other factors as well: common experience in the university, student corporations, and spas; cross-membership in supervisory boards and the resultant network of relationships; the centralization of administration in Berlin; joint work in associations. The changing capitalist industrial system created its own institutions, and these ensured its maintenance and further development. To a certain extent, what Weber said with regard to the religiously motivated spiritual ascetic also applied to the family: "The victorious capitalism ... no longer needed this support once it had become institutionalized."⁸⁵

Second, in later decades if entrepreneurs held to family strategies for the solution of their problems even though by then more efficient alternatives were available, this often had a negative effect on their businesses, especially large enterprises, where in any case the requirements were rather disproportionate to the resources of the family. Most of the examples of the inhibiting effect of family ties come from the later period. It is only after the late-nineteenth century, and especially in big business, that the limits of the family business and dysfunctional elements in the relationship between family and industry emerged clearly, although, as we have seen, they were latent in the initial phase, too.

Finally, the family itself changed in a way that made it less and less suitable as a vehicle for these economic functions. The average number of children dropped; and the ability to take on the entrepreneurial role declined, particularly in the third generation,⁸⁶ partly as a result of economic success which opened up new worlds to the children. Internal processes of individualization occurred in the family. The transfer of

functions to alternative structures outside the family and the loosening of family ties reinforced each other.

However, these were only tendencies. Still, at the end of the 1930s, Otto Suhr reckoned that, of about 4,200 firms in mechanical engineering, 120 were more than one hundred years old and nearly half of these were still in the hands of the founding family.⁸⁷ Even today there are still many successful family businesses. Large numbers of new ones continue to emerge anew. Small and medium-size companies, in particular, still strongly depend on the family background. So even in the age of advanced managerial capitalism, family ties have not only negative effects; on the contrary.⁸⁸ As far as Schumpeter's grim prognosis that capitalism will wither if the family sphere no longer provides any motivation⁸⁹ is concerned, the last word has not yet been spoken.

Notes

1. M. Weber, *Die protestantische Ethik und der Geist des Kapitalismus* (in idem, *Die protestantische Ethik*, ed. J. Winckelmann, Siebenstern Taschenbuch 53 [Munich, 1965], pp. 29-114); J.A. Schumpeter, *Capitalism, Socialism and Democracy* (New York, 1942); E.J. Hobsbawm, *The Age of Capital 1848-1875* (London, 1977), ch. 13.
2. For an introduction, see M. Mitterauer and R. Sieder, *Vom Patriarchat zur Partnerschaft: Zum Strukturwandel der Familie* (Munich, 1977). D. Schwab, "Art 'Familie,'" in *Geschichtliche Grundbegriffe: Historisches Lexikon zur politisch-sozialen Sprache in Deutschland*, ed. O. Brunner et al. (Stuttgart, 1975), vol. 2, pp. 253-301. On the family in the nobility: H.-G. Reif, *Westfälischer Adel 1770-1860: Vom Herrschaftsstand zur regionalen Elite* (Göttingen, 1979). On the older craft families, especially: H. Möller, *Die kleinbürgerliche Familie im 18. Jahrhundert. Verhalten und Gruppenkultur* (Berlin, 1969); H. Rosenbaum (ed.), *Seminar: Familie und Gesellschaftsstruktur*, (Frankfurt, 1978).
3. The opposite argument predominates in some of the literature on the history of enterprises and modernization, e.g., T.C. Cochran, "The Entrepreneur in Economic Change," *Explorations in Entrepreneurial History* 3 (1965/66): 25-38, esp. 26f., 28, 36 (on the dysfunctional role of the family in economic growth); D.S. Landes, "French Business and the Businessman," in *Exploration in Enterprise*, ed. H. G. Aitkens (Cambridge, MA, 1965), pp. 184-200.
4. See J. Kocka, "Entrepreneurs and Managers in German Industrialization," in *The Cambridge Economic History of Europe*, vol. 7, pt. 1, ed. P. Mathias and M.M. Postan (Cambridge, 1978), pp. 527-36.
5. On principal issues: Schumpeter, *Capitalism*, ch. 14; see also: H. Schelsky, *Wandlungen der Familie in der Gegenwart*, 2nd ed. (1954), p. 154; F. Oeter, "Familie und Gesellschaft unter dem Einfluß des Industriekapitalismus," *Schmollers Jahrbuch* 77 (1957): 513-46, esp. 519. For Siemens, cf. below, p. 125. On Krupp: H. Witt, *Die Triebkräfte des industriellen Unternehmertums vor hundert Jahren und heute* (Hamburg, 1929), p. 97.

6. For summary of the origin of the first generation of industrial entrepreneurs, see Kocka, "Entrepreneurs and Managers," pp. 510-11, 516-27 and ch. 4 above.
7. Particularly, Möller, *Die kleinbürgerliche Familie*; R. Stadelmann and W. Fischer, *Die Bildungswelt des deutschen Handwerkers um 1800* (Berlin, 1955); H. Kelleter, *Geschichte der Familie J.A. Henckels in Verbindung mit einer Geschichte der Solinger Industrie* (Solingen, 1924), p. 125ff.; on G.T. Bienert (1813-1894), see E. Dittrich, ed., *Lebensbilder Sächsischer Wirtschaftsführer* (Leipzig, 1941), pp. 58-73. On education, also: H. Beau, *Das Leistungswissen des frühindustriellen Unternehmertums in Rheinland und Westfalen* (Cologne, 1959), p. 25ff.; see also G. Tietz, *Hermann Tietz: Geschichte einer Familie und ihrer Warenhäuser* (Stuttgart, 1965), p. 20f., on the great importance of the family of a small Jewish carter for the education and training of the son, later the founder of a department store, Oscar Tietz.
8. Cf. P.E. Schramm, *Neun Generationen: Dreihundert Jahre deutscher Kulturgeschichte im Lichte der Schicksale einer Hamburger Bürgerfamilie (1648-1948)* (Göttingen, 1963), vol. 1, esp. pp. 206ff., 238ff.; R. v. Carstanjen, *Geschichte der Duisburger Familie Carstanjen* (Cologne, 1934); B. Nadolny, *Felix Heinrich Schoeller und die Papiermacherkunst in Düren: Ein Lebensbild aus der Gründerzeit* (Baden-Baden, 1957); F. Zunkel, *Der rheinisch-westfälische Unternehmer 1834-1879: Ein Beitrag zur Geschichte des deutschen Bürgertums im 19. Jahrhundert* (Cologne-Opladen, 1962), esp. pp. 69ff., 111ff.; F. Decker, *Die betriebliche Sozialordnung der Dürener Industrie im 19. Jahrhundert* (Cologne, 1964), esp. pp. 115ff.; L. Beutin, "Die märkische Unternehmerschaft in der frühindustriellen Zeit," *Westfälische Forschungen* 10 (1957): 64-74, esp. 69; W. Köllmann, *Sozialgeschichte der Stadt Barmen im 19. Jahrhundert* (Tübingen, 1960), p. 111ff.
9. W. Stahl, *Der Elitenkreislauf in der Unternehmerschaft: Eine empirische Untersuchung für den deutschsprachigen Raum* (Frankfurt/Zurich, 1973), p. 287f.
10. See Beau, *Das Leistungswissen*, pp. 13-15.
11. Beau, *Das Leistungswissen*, esp. pp. 13-27; Beutin, "Die märkische Unternehmerschaft," p. 70f.; Decker, *Die betriebliche Sozialordnung*, p. 114f.; Köllmann, *Sozialgeschichte*, p. 112; Schramm, *Neun Generationen*, pp. 177, 238f.; and Zunkel, *Der rheinisch-westfälische Unternehmer*, p. 72ff. See also F. Hellwig, "Unternehmer und Unternehmungsform im saarländischen Industriegebiet," *Jahrbücher für Nationalökonomie und Statistik* 158 (1943): 402-30, esp. 408; A. Eyberg, "Umwelt und Verhalten der Unternehmer des Oberbergischen Kreises im 19. Jahrhundert," (thesis, Cologne, 1955), p. 125f.; Witt, *Die Triebkräfte*, pp. 103ff.; F. Redlich, *Der Unternehmer* (Göttingen, 1964), p. 328.
12. Generally, J. Kocka, "Stand – Klasse – Organisation: Strukturen sozialer Ungleichheit in Deutschland vom späten 18. bis zum frühen 20. Jahrhundert im Aufriss," in *Klassen in der europäischen Sozialgeschichte*, ed. H.-U. Wehler (Göttingen, 1979), p. 140f.
13. See H. Kaelble, *Berliner Unternehmer während der frühen Industrialisierung: Herkunft, sozialer Status und politischer Einfluß* (Berlin, 1972), pp. 55, 123 (the figures on Thuringia are from W. Huschke).
14. Examples in P. Coym, "Unternehmensfinanzierung im frühen 19. Jahrhundert – dargestellt am Beispiel am Rheinprovinz und Westfalens" (thesis, Hamburg, 1971), p. 37f.; L. Baar, *Die Berliner Industrie in der industriellen Revolution* (Berlin, 1966), p. 144f.
15. See, e.g., H. Mönnich, *Aufbruch ins Revier: Aufbruch nach Europa: Hoesch 1875-1971* (Munich, 1971), pp. 61ff., 91ff.; H. Kelleter and E. Poensgen, *Die Geschichte der Familie Poensgen* (Düsseldorf, 1908), p. 119 (the move by the old entrepreneurial families from the Eifel or Düren to Dortmund and Düsseldorf in the middle of the nineteenth century).
16. Figures from W. Herrmann, *Entwicklungslinien montanindustrieller Unternehmungen im rheinisch-westfälischen Industriegebiet* (Dortmund, 1954), p. 15; A. Schröter

- and W. Becker, *Die deutsche Maschinenbauindustrie in der industriellen Revolution* (Berlin, 1962), p. 72; E. Klein, "Zur Frage der Industriefinanzierung im frühen 19. Jahrhundert," in *Öffentliche Finanzen und privates Kapital im späten Mittelalter und der ersten Hälfte des 19. Jahrhunderts*, ed. H. Kellenbenz (Stuttgart, 1971), p. 118-28, esp. 119f.
17. From figures and calculations by Stahl, *Der Elitenkreislauf*, p. 309f.
18. On the accumulation of capital through marriage generally, see the study of Boston merchants in the eighteenth century: P.D. Hall, "Family Structure and Economic Organization: Massachusetts Merchants, 1700-1850," in *Family and Kin in Urban Communities 1700-1930*, ed. T.K. Hareven (New York, 1977), p. 38-61, here p. 41ff.
19. S. and C. Griffen, "Family and Business in a Small City: Poughkeepsie, New York, 1850-1880," in *Family and Kin*, ed. Hareven, pp. 144-63, here 150. A few German cases in Coym, "Unternehmensfinanzierung," p. 38ff.
20. See the examples in W. Berdrow, *Die Familie Krupp in Essen 1587-1887* (Essen, 1932), pp. 247f. (retraction of a contract handing over property to Friedrich Krupp by his mother and grandmother), 296, 313. When Friedrich Krupp, aged 61, quite unexpectedly married a 21-year-old woman, considerable sums that had been lent by his in-laws were demanded back, completely ruining him. On this problem generally and on lawsuits between members of families see Griffen, "Family and Business," p. 153f.
21. It is doubtful state credits could have helped here. In practice, they played a very minor role. See Coym, "Unternehmensfinanzierung," p. 113ff.; H. Winkel, "Kapitalquellen und Kapitalverwendung am Vorabend des industriellen Aufschwungs in Deutschland," *Schmollers Jahrbuch* 90/1 (1970): 275-301, here p. 286ff. (with a rather favorable verdict).
22. Around 1820, the Solingen knife manufacturer Henckels needed between two and three weeks for his trip to Berlin, where he had set up a sales branch soon to be taken over by his son (Kelleter, *Geschichte der Familie*, p. 127). In 1854 a letter from Berlin to Saint Petersburg took a fortnight. The head office of Siemens & Halske was in Berlin, and the company had set up a branch in Saint Petersburg, which was soon directed by the brother of the founder. See the letter from Werner Siemens, 16 June 1854, in F. Heintzenberg, ed., *Aus einem reichen Leben: Werner von Siemens in Briefen an seine Familie und an Freunde* (Stuttgart, 1953), p.90.
23. See J. Kocka, *Unternehmensverwaltung und Angestelltenschaft am Beispiel Siemens 1847-1914* (Stuttgart, 1969), p. 82f.; Decker, *Die betriebliche Sozialordnung*, p. 19 (on cases in Düren); an impressive account of the establishment of a department store "concern" on a family basis is in Tietz, *Hermann Tietz*, p. 19-33; Kaelble, *Berliner Unternehmer*, p. 57f.; G. Goldbeck, *Kraft für die Welt, 1864-1964: Klöckner-Humboldt-Deutz AG* (Düsseldorf/Vienna, 1964) (cases of relatives traveling for the firm); for similar material: H. Kelleter and E. Poensgen, *Die Geschichte*, p. 110. And: Mönnich, *Aufbruch*, pp. 62, 91 (on Hoesch); Kelleter, *Geschichte der Familie*, p. 129ff.; Berdrow, *Die Familie Krupp*, pp. 296, 306f., 310, 349ff. See Schramm, *Neun Generationen*, pp. 272, 365, on the decentralization of a business into two legally independent units in 1805/6 and its reunification soon after on a family basis. On management organization on family lines in British industry, see S. Pollard, *The Genesis of Modern Management* (London, 1965), p. 145ff.; in general: W.A. Lewis, *Die Theorie des wirtschaftlichen Wachstums* (Tübingen, 1956), p. 125f.; A. Marshall, *Industry and Trade* (London, 1959), p. 326.
24. See above ch. 2 and Kocka, *Unternehmensverwaltung*, pp. 76, 82, 132f., 207, 253; S. v. Weiher, "Die Entwicklung der englischen Siemens-Werke und des Siemens-Überseegeschäftes in der zweiten Hälfte des 19. Jahrhunderts" (thesis, Freiburg, 1959); idem, "Carl von Siemens 1829-1906: Ein deutscher Unternehmer in Russland und England," *Tradition* 1 (1956): 13-25.
25. Griffen, "Family and Business," p. 156f.

26. In the sample given by Stahl (*Der Elitenkreislauf*, p. 241), owner-entrepreneurs of the second or a later generation became shareholders in a family business on average at the age of 24.
27. See Hellwig, "Unternehmer," p. 429, for cartel-like agreements in the Saarland. See also Decker, *Die betriebliche Sozialordnung*, p. 113f.: "Marriages between the Düren industrialists' families had become so frequent in the course of the centuries that industry in Düren in the nineteenth century can be described as one huge family concern. Indeed family relationships worked like business relationships...."
28. See A. Gerschenkron, "Social Attitudes, Entrepreneurship and Economic Development," *Explorations in Entrepreneurial History* 6 (1953/4): 1-19, here 13: the view of the entrepreneur as lacking in tradition and relationships.
29. See Redlich, *Der Unternehmer*, p. 186; R. Engelsing, "Bremisches Unternehmertum," in *Schriften der Wittheit zu Bremen* (Bremen, Hannover, 1958), vol. 2, pp. 7-112, here p. 49. This is the great economic significance of belonging to religious minorities that were closely linked socially but widely distributed geographically. Cf. on the Jewish case, D.S. Landes: "The Bleichröder Bank: An Interim Report," in *Publications of the Leo Baeck Institute: Year Book 5* (1960), pp. 201-20; and W. E. Mosse, *Jews in the German Economy. The German-Jewish Economic Elite 1820-1835* (Oxford, 1987).
30. See H. Zwahr, "Zur Klassenkonstituierung der deutschen Bourgeoisie," *Jahrbuch für Geschichte* 18 (1978): 21-83, here 28 (figures on Leipzig); the Bielefeld figures are calculated by K. Ditt: cf. J. Kocka et al., *Familie und soziale Platzierung* (Opladen, 1980); Berlin figures from Kaelble, *Berliner Unternehmer*, p. 185.
31. Cf. B. Berdrow, *Die Familie Krupp*, on the seventh and eighth generations (Friedrich und Alfred Krupp), esp. pp. 240, 245f., 276f., 282ff., 287f., 290, 293f., 296f. (for a crisis in these relationships), 299, 300f., 305f., 309ff., 316ff., 349ff., 352.
32. See Zunkel, *Der rheinisch-westfälische Unternehmer*, p. 110ff.; Zwahr, "Zur Klassenkonstituierung," p. 41f. (on Saxony); M. Barkhausen, "Der Aufstieg der rheinischen Industrie im 18. Jahrhundert und die Entstehung eines industriellen Großbürgertums," *Rheinische Vierteljahrsblätter* 19 (1954): 135-78, esp. 174.
33. The expansion beyond local areas is stressed by Zunkel (*Der rheinisch-westfälische Unternehmer*) after the second half of the nineteenth century, p. 19f.; pp. 13-22 contain a survey of important dynasties in the West German commercial bourgeoisie. For the marriage patterns of leading Leipzig industrialists, which went beyond regional limits but were concentrated in Saxony, see Zwahr, "Zur Klassenkonstituierung," pp. 36-42. Hellwig, "Unternehmer," pp. 408-13, esp. p. 409, concentrates on the expansion of the marriage policy of industrialists in the Saar to the whole of the southwest of Germany.
34. See Schramm, *Neun Generationen*, pp. 176, 255ff.; Zunkel, *Der rheinisch-westfälische Unternehmer*, p. 21; similarly, for the Saarland, Hellwig, "Unternehmer," p. 408.
35. See G. Adelman, "Die wirtschaftlichen Führungsschichten der rheinisch-westfälischen Baumwoll- und Leinenindustrie von 1850 bis zum Ersten Weltkrieg," in *Führungskräfte der Wirtschaft im neunzehnten Jahrhundert 1790-1914*, ed. H. Helbig (Limburg/Lahn, 1977), part 2, pp. 177-99, here p. 183; E. Dittrich, Vom "Wesen sächsischen Wirtschaftsführertums," in *Lebensbilder sächsischer Wirtschaftsführer*, ed. E. Dittrich (Leipzig, 1941), pp. 1-56, here 48f. (on the textile industry). In Bielefeld they used to say "Linen to linen."
36. See Berdrow, *Die Familie Krupp*, pp. 284, 308; generally on this phenomenon, see also Mitterauer and Sieder, *Vom Patriarchat*, p. 27.
37. See Schramm, *Neun Generationen*, p. 264; Köllmann, *Sozialgeschichte*, p. 112.
38. See Kocka, "Stand," p. 138f.
39. See Schramm, *Neun Generationen*, pp. 248, 253; see also J.V. Bredt, *Haus Bredt-Rübel: Geschichte des Hauses und seiner Bewohner* (Wuppertal-Elberfeld, 1937), p. 43ff.: the

exclusion of two ne'er-do-well nephews from an inheritance, a decision that was to be reexamined and, if possible, revoked after six years.

40. The German concepts are: *ganzes Haus* and *Hausgemeinschaft*, translated here as "household," and *bürgerliche Familie*, translated as "middle-class family." On the choice of concepts, see Mitterauer and Sieder, *Vom Patriarchat*, pp. 18-23, esp. p. 22f.; O. Brunner, "Das 'Ganze Haus' und die alteuropäische 'Ökonomik,'" in idem, *Neue Wege der Verfassungs- und Sozialgeschichte*, 2nd ed. (Göttingen, 1968), p. 103ff.
41. For an example of a widow who carried on the business until her son could take it over: R.L. Mehmke, "Entstehung der Industrie und Unternehmertum in Württemberg," *Deutsche Zeitschrift für Wirtschaftskunde* 4 (1939): 113. See also E. Schmieder, "Die wirtschaftliche Führungsschicht in Berlin 1790-1850," in *Führungskräfte*, ed. Helbig, pp. 1-58, esp. p. 57.
42. For quotations from letters by Werner Siemens to his fiancée and later wife in the 1850s cf. Heintzenberg, ed., *Aus einem reichen Leben*, pp. 50, 77. On the way the "middle class family" of the nineteenth century saw itself, see Schwab, "Art 'Familie,'" p. 293ff. See Bredt, *Haus Bredt-Rübel*, p. 77, for a case in which the family of the younger son shared the same house as the mother but not the same household.
43. From Zwahr, "Zur Klassenkonstituierung," p. 28.
44. Of 148 active entrepreneurs examined by Stahl (*Der Elitenkreislauf*, p. 302) in the nineteenth and twentieth centuries, only seven were unmarried.
45. From the tree in Kelleter, *Geschichte der Familie*.
46. More precisely, "full marriages," those in which the couple remains together until the end of the presumed fertility period of the wife (forty-five years of age). See A. von Nell, "Die Entwicklung der generativen Strukturen bürgerlicher und bäuerlicher Familien von 1750 bis zur Gegenwart" (thesis, Bochum, 1973), p. 29.
47. For contrast, see the extremely active, almost independent role played in the enterprise by the wife of Henckels in Solingen around 1815: Kelleter, *Geschichte der Familie*, p. 129; the same applied to the wives of Hamburg merchants in the late eighteenth century: Schramm, *Neun Generationen*, p. 206; on the active roles played by the mother and grandmother of Alfred Krupp around 1800, see Berdrow, *Die Familie Krupp*, pp. 247f., 276. On the patriarchal role played by the father of the family in entrepreneurial households in the second third of the nineteenth century, see Zunkel, *Der rheinisch-westfälische Unternehmer*, p. 73f.; Köllmann, *Sozialgeschichte*, p. 118; on the tradition of the patriarchal and autocratic head of the household, see Möller, *Die kleinbürgerliche Familie*, p. 10ff. On the change in the role of women during the transition from the eighteenth century to the nineteenth, see esp. K. Hausen: "Die Polarisierung der 'Geschlechtscharaktere' – eine Spiegelung der Dissoziation von Erwerbs- und Familienleben," in *Sozialgeschichte der Familie in der Neuzeit Europas*, ed. W. Conze (Stuttgart, 1976), pp. 367-93.
48. See the examples in Zunkel, *Der rheinisch-westfälische Unternehmer*, pp. 71, 73; Berdrow, *Die Familie Krupp*, p. 284 (on the christening of Alfred Krupp in 1812); Schramm, *Neun Generationen*, p. 206ff.
49. See G. Hahn, "Untersuchungen über die Ursachen von Unternehmensmißerfolgen," (thesis, Cologne, 1956), p. 37f.; Zunkel, *Der rheinisch-westfälische Unternehmer*, p. 73. When Friedrich Krupp lost his house and his position in 1809, the young family moved into the mother's house, where other married brothers and sisters were living (Berdrow, *Die Familie Krupp*, p. 249). Paul Bredt moved back into his parents' house with his five children in 1879 when his wife died suddenly; see Bredt, *Haus Bredt-Rübel*, p. 85.
50. For an example of one of the rare unmarried entrepreneurs: Gottfried Henckels, 1804-58, for whom his relationship with the Gichtelianer sect obviously sufficed, fulfilling the role the family otherwise would have taken, even aiding the recruitment of senior staff (Kelleter, *Geschichte der Familie*, pp. 138ff., 153). Mosse assumes that there was less long-term cohesion in Jewish families, although there are

- spectacular cases of the contrary, than in comparable non-Jewish families. Cf. Mosse, *Jews*, p. 66f. C. Wilson points out that the solidarity of non-conformist religious sects in England furthered economic growth. He goes on: "The Meeting House or Chapel extended the ties of the family, and you lent or borrowed within your known community with a confidence hardly yet to be extended beyond such limits" (C. Wilson, "The Entrepreneur in the Industrial Revolution in Britain," *Explorations in Entrepreneurial History* 7 (1954/5): 129-45, here 131).
51. There are many instances from Hamburg in the later eighteenth and early nineteenth century in Schramm, *Neun Generationen*, e.g. pp. 202, 206ff., 381. On the relation between Werner Siemens and his fiancée and later wife Mathilde, daughter of a professor, in the 1850s, see the correspondence between them in Heintzenberg, ed., *Aus einem reichen Leben*, pp. 48-98, esp. pp. 50, 51, 52, 62, 63, 70, 72, 82f., 85, 87; on the close relationship between Werner Siemens and his brothers and its importance for the business, pp. 13, 14f., 19, 33, 64, 68, 320. Werner Siemens, the elder, had promised his mother shortly before her death that he would provide for his younger brothers and sisters (pp. 60, 95). A similar promise was given by three brothers on the deathbed of their widowed mother in 1855: Schramm, *Neun Generationen*, p. 217.
 52. Werner to Carl Siemens, 4 November 1863, in C. Matschoß, ed., *Werner Siemens: Ein kurzgefaßtes Lebensbild nebst einer Auswahl seiner Briefe* (Berlin, 1916), vol. 1, p. 218; similarly, on 25 December 1887, *ibid.*, vol. 2, p. 911, and to his son Wilhelm, his successor in the business, on 22 December 1883, in Heintzenberg, ed., *Aus einem reichen Leben*, p. 320.
 53. See H. Siemens, *Stammbaum der Familie Siemens* (Munich, 1935), p. 26 (quotation), p. 18.
 54. See Schramm, *Neun Generationen*, pp. 429 (portraits), 238 (the tradition of handing on names, which after the early nineteenth century gradually gave way to the desire for greater individualization); Mönnich, *Aufbruch*, p. 61 (family legends). Entries in the family Bible were used as a source by Bredt, *Haus Bredt-Rübel*.
 55. See R. Braun, *Sozialer und kultureller Wandel in einem ländlichen Industriegebiet (Zürcher Oberland) unter Einwirkung des Maschinen- und Fabrikwesens im 19. und 20. Jahrhundert* (Erlenbach/Zürich/Stuttgart, 1965), pp. 106f. This shows how small families that were differently structured and had particularist inclinations rather hindered the development of larger enterprises and groups of enterprises.
 56. See e.g., Adelman, "Die wirtschaftlichen Führungsschichten," p. 181.
 57. Zunkel, *Der rheinisch-westfälische Unternehmer*, p. 73; Schramm, *Neun Generationen*, p. 253, also mentions family days.
 58. Berdrow, *Die Familie Krupp*, p. 258.
 59. See Möller, *Die kleinbürgerliche Familie*, p. 305f.
 60. On these claims and this idealization of the bourgeois family of the time: Schwab, "Art. 'Familie,'" pp. 291-97; Mitterauer and Sieder, *Vom Patriarchat*, p. 160.
 61. Von Nell, "Die Entwicklung," pp. 74, 75; for comparative figures, see pp. 72, 107, 108. The Bielefeld data are from a random sample of fourteen marriages, from 1830 to 1910, by K. Ditt (see note 30, above).
 62. See Stahl, *Der Elitenkreislauf*, p. 242. On average, heirs began to take over their families' businesses a year earlier (at 29).
 63. The tendency within the bourgeoisie not to marry until a certain degree of commercial success had been achieved was already apparent at the end of the eighteenth century; see Möller, *Die kleinbürgerliche Familie*, p. 171, esp. n6.
 64. See F. Zunkel, *Der rheinisch-westfälische Unternehmer*, p. 73, esp. n46; see also Schramm, *Neun Generationen*, p. 248; and on Charlotte Wilhelmine Honsberg in Wuppel around 1800, "weak in the head but very anxious to marry," see Bredt, *Haus Bredt-Rübel*, p. 45f.

65. See examples *ibid.*, pp. 381f. (1813/14); Kelleter, *Geschichte der Familie*, p. 154f., on the marriage of one of the heirs in 1840; Mönnich, *Aufbruch*, p. 95; the letters from Werner Siemens to his fiancée, later wife (cited in note 51, above). One often has the impression that there would have been economically more rational alternatives for the entrepreneur in some cases. This also applies to Alfred Krupp's late marriage to Bertha Eichhoff, daughter of a public servant, and certainly that of his son Friedrich Alfred to Margaretha von Ende in 1882, which the father had prevented for years (Berdrow, *Die Familie Krupp*, pp. 316, 369f.).
66. See also H. Münch, *Adolph von Hanseemann* (Munich, Berlin, 1932); Bredt, *Haus Bredt-Rübel*, p. 73.
67. For an example, see W. Kurschalt, "Das Haus Friedrich & Heinrich von der Leyen in Krefeld" (thesis, Bonn, 1933), p. 32.
68. Werner Siemens seems to have taken it for granted that his eldest son, Arnold, born in 1853, would take on the business. His second son, Wilhelm, born in 1855, apparently was originally intended to go into parliament or act as the "scientific spirit of the business." The third, Carl Friedrich, was not born until 1872, in the father's second marriage and was too young to be considered for the succession, which was decided in the early 1880s. However, the eldest son proved poorly suited to the task. The succession then came to the second son, whose diary entries during his youth show considerable torments of self-doubt. Nevertheless, he went into the business in 1879 (without finishing his studies), where he assumed various functions (with interruptions due to illness) and took over the direction of the firm in 1890. The founder, born in 1816, therefore had to carry on as head of the firm, which was growing rapidly and increasingly straining him, for a few years longer than he intended. In 1893, the firm was reorganized as a joint-stock company. Cf. chapter 3 above and A. Roth, *Wilhelm von Siemens* (Berlin, Leipzig, 1922).
69. On the other hand, it must be borne in mind that industrial enterprises and capital are in principle easier to divide than the land owned by the nobility and the rights this brings. See the excellent discussion of these problems by H. Reif, in Kocka et al., *Familie und soziale Platzierung*, pp. 34-44; he also discusses the case of the nobility, *ibid.*, pp. 67-126.
70. See W. Berdrow, *Alfred Krupp* (Berlin, 1927), vol. 1, pp. 221-7; on brother Friedrich, *idem*, *Die Familie Krupp*, p. 361f. See also note 79, below.
71. See the figures in Stahl, *Der Elitenkreislauf*, p. 284.
72. For instance, in the Düren paper industry: Decker, *Die betriebliche Sozialordnung*, pp. 31, 104, 105 (esp. n43).
73. For examples, see H.A. William, *Carl Zeiss 1816-1888* (Munich, 1967), pp. 91-102; on obligations laid on sons and grandsons, see Kurschalt, "Das Haus," p. 17, for the will made by Heinrich von der Leyen (Krefeld) in 1782.
74. See S. Haubold, "Entwicklung und Organisation einer Chemnitzer Maschinenfabrik," (thesis, Bonn, 1939), p. 32ff.; H. Rachel & P. Wallich, *Berliner Großkaufleute und Kapitalisten* (Berlin, 1967), vol. 2, pp. 222, 223; Witt, *Die Triebkräfte*, p. 97.
75. See Herrmann, *Entwicklungslinien*, p. 15, for an early example in 1834; see also Mönnich, *Aufbruch*, p. 91ff., on Hoesch, 1871; Kelleter, *Geschichte der Familie*, p. 181, on the change to a partnership limited by shares (1882); on the possibility of changing the legal form to a GmbH and Stumm's influence on the 1892 legislation: Hellwig, "Unternehmer," p. 423f.; on the frequency of the change even in the second generation: Stahl, *Der Elitenkreislauf*, p. 258.
76. An example is the "Siemens'sche Vermögensgemeinschaft" of 1897 (or earlier), which collected the family capital, had statutes, and was administered by two employees. In light of the size of the enterprises, their spread, and the amount of capital involved, this clearly was the only way to handle the family members' claims to disposition and management, which were anchored in shareholdings. So a semi-public sphere developed between the level of the enterprise and the truly private

- sphere of the individual members or branches of this huge family. See Kocka, *Unternehmensverwaltung*, p. 453.
77. I.e., if the enterprise was not sold to satisfy the claims of the heirs.
 78. See A. Paulsen, "Das 'Gesetz der dritten Generation': Erhaltung und Untergang von Familienunternehmungen," in *Der praktische Betriebswirt* 21 (1941): 271-80, here 278f., and above.
 79. In the Henckels case, from 1870 to 1879: Kelleter, *Geschichte der Familie*, p. 175ff. After the death of the father, there were lawsuits over the inheritance. For a time, the widow thought of selling to meet the various claims.
 80. In the 1880s at Siemens. See chapter 3 above.
 81. Leopold Schoeller & Söhne in 1862 in Düren. See Decker, *Die betriebliche Sozialordnung*, p. 31.
 82. For examples from Krupp and Siemens, see Berdrow, *Die Familie Krupp*, p. 349ff; Kocka, *Unternehmensverwaltung*, p. 352ff.
 83. See R. Braun, *Sozialer und kultureller Wandel*, p. 106f.; H.J. Habakkuk, *Industrial Organisation since the Industrial Revolution* (Southampton, 1968), p. 12; D.S. Landes, "The Structure of Enterprise in the Nineteenth Century," in *XIe Congrès International de Science Historique. Stockholm, 21.-28th August, 1960. Rapports V.* (Upsala, 1960), p. 115. See also the Stinnes brothers and sisters' skepticism of the joint-stock company, which they were prepared to accept in 1848 only as an emergency and transitional arrangement until the family business could be reestablished: Herrmann, *Entwicklungslinien*, p. 14f.
 84. See Braun, *Sozialer und kultureller Wandel*, p. 106.
 85. Weber, *Die Protestantische Ethik*, p. 188.
 86. Stahl's quantitative examination of management through successive generations (*Der Elitenkreislauf*, p. 255f.) would appear to confirm this "law of the third generation," which certainly did not apply in the pre-industrial age: in or immediately after the third generation, direction of the enterprise often passed out of the family's hands (see, esp., p. 264). Examples of the collapse of entrepreneurial families that had been successful for generations or their retirement from business life around the middle of the nineteenth century can be found in Zunkel, *Der rheinisch-westfälische Unternehmer*, p. 112ff.; see also Kurschalt, "Das Haus," pp. 90ff., 135f. Hypotheses: Paulsen, "Das 'Gesetz,'" esp. pp. 274f. (the dangers of success) and 278f. (inheritance problems).
 87. O. Suhr, "Famitientradition im Maschinenbau: Untersuchungen über die Lebensdauer von Unternehmungen," *Wirtschaftskurve* 1 (1939): 29-50, here 32, 34.
 88. Examples from the early twentieth century: Kocka, "Entrepreneurs and Managers," p. 583f.; H. Böhme, "Emil Kirdorf: Überlegungen zu einer Unternehmerbiographie," *Tradition* 13 (1968): 294.
 89. See Schumpeter, *Capitalism*, ch. 14.

Chapter 6



Salaried Entrepreneurs in German Industry at the Turn of the Twentieth Century

Translated from the French by Luise von Floto

In many companies at the end of the nineteenth century and the beginning of the twentieth, the functions¹ and authority² of entrepreneurs were increasingly assigned to salaried persons. These were not owners of the companies; they were managers. The rise of the salaried entrepreneur – to be distinguished from the owner-entrepreneur – is the theme of this chapter.

The separation between ownership and management occurred in joint-stock companies (*Aktiengesellschaften* [AGs]), in limited-liability companies (*Gesellschaften mit beschränkter Haftung* [GmbHs]) and in companies with a similar legal status (e.g., *Gewerkschaften* in the mining sector)³ but did not apply in all cases. Emil Kirdorf, director-general of the Gelsenkirchen Bergwerks AG and founder of the syndicate of collieries of Rhineland-Westphalia (Rheinisch-Westfälisches Kohlen-syndikat), Emil Rathenau, founder and director-general of AEG, and Carl Fuerstenberg, banker and administrator of the Berliner Handelsgesellschaft, are all examples of powerful managers who did not own much capital. These appointed managers, known at the time (and still today) as “directors,” have been the focus of interest for the general public and for social scientists since the end of the nineteenth century.

Notes for this section begin on page 153.

They were the source of great hopes and profound anxieties and were viewed as indicators of fundamental social change.

Over the course of the last quarter of the nineteenth century, salaried entrepreneurs in manufacturing and mining (but not in banking and transport) were subject to the distrust and scorn of both public opinion and many owner-entrepreneurs. The general view was that, because managers had no capital investment, incurred no personal risk, and drew no profits in the case of success, they would not work as hard for their companies. Even as late as the 1880s and 1890s, the general opinion was that the manager was less motivated and effective than the traditional owner-entrepreneur. Moreover, the feeling was that the manager would be more likely to engage in questionable business practices.

Owner-entrepreneurs tended to look down on salaried entrepreneurs and view their own capital investment and the risk this involved as the basis of their right to a certain economic and social status, even when they were convinced of the manager's abilities.⁴ The history of the concepts *Unternehmer* (entrepreneur) and *Direktor* (manager) reflects this reality. "Unternehmer" generally refers to people who not only take initiatives and manage businesses but also are willing to take financial risks by being the owners of businesses in a market economy that is full of uncertainties and risks. In contrast, "Direktor" generally applies to high-ranking salaried managers who do not have the characteristics essential to "true" entrepreneurs, that is, private ownership of the means of production, along with the attitudes and values this entails. This, in fact, is how owner-entrepreneurs chose to describe themselves in the nineteenth century and at least into the 1950s and 1960s, partly in order to defend their social positions, which were being put into question, and to legitimate their claims to a certain social status and power; for them and for many others, the word "Direktor" was the residual and sometimes rather pejorative term used to designate individuals who functioned as the heads of companies but whose social and class positions were different from those of "true" entrepreneurs, that is, those who were independent.⁵

Yet sociologists interested in social reform, such as Gustav Schmoller and James Burnham, as well as defenders of technocratic philosophy invested great hopes in the rise of the salaried entrepreneur. The expectation was that, unlike the traditional owner-entrepreneurs, they would be motivated more by ideas about public welfare than personal profit. They were thought of as equivalent to high-level civil servants. Because of their education and training, they were thought to be particularly likely to have structured, objective, and systematic approaches and thus be the right people to resolve, or at least quell, social conflicts, while

holding high positions in society and government. The increase in both number and importance of managers at the top of the enterprises seemed to be leading to a fundamental political change in the capitalist system as well as to a change in class structures and the political power derived from them. The rise of salaried entrepreneurs seemed to prove that Marxist social analysis, which emphasized ownership of the means of production as the important factor determining economic conflicts, social class, and political power, was in fact wrong. For some observers, the rise of managers seemed to mark a modernization process that would successfully resolve painful, traditional social divisions.⁶ The most open-minded among this new group of managers did adopt these ideas; they used them to portray the view they had of themselves and to legitimize their claims to a certain social status and power.⁷

Was there any foundation to these expectations, hopes, and fears? In the following pages, we will study the problem as revealed in the very limited materials at our disposal.

(1) Until the First World War and the years following, salaried entrepreneurs were a minority. In the manufacturing, mining, and construction sectors in 1907, we find 109,639 units with more than ten employees, 27,205 with more than fifty employees, 5,423 with more than two hundred, and 548 with more than one thousand. In 1907 there were slightly more than three thousand joint-stock companies in manufacturing and mining (slightly more than five thousand in all sectors of the economy), and about the same number of limited-liability companies.⁸ It is hard to say exactly how many salaried entrepreneurs⁹ worked in each of the large companies, since a clear distinction between such managers and other types of middle and upper management could not be established even if more systematic information about the decision-making structures in each company (which were all very different from one another) were available. Members of the executive board – the *Vorstand* (in an AG) or *Geschäftsführer* (in a GmbH) – as well as certain members of the boards of directors (*Aufsichtsrat*) were doubtless paid managers. Assuming that there were five such individuals per company, this accounts for a total of fifteen thousand top managers in manufacturing, mining, and construction, at most 30 percent of all the entrepreneurs engaged in the large companies (those with more than fifty employees) in these sectors. This is assuming that there was rarely more than one entrepreneur in a company that was neither an AG or a GmbH. In commerce and transport, the proportion of salaried entrepreneurs was probably smaller; in banking, higher.¹⁰

Nonetheless, these figures are somewhat distorted. Not all those running joint-stock or limited-liability companies were salaried entrepreneurs who merely controlled the business without owning it. The joint-stock company often was nothing more than the external form of a family enterprise continuing under that guise. Wilhelm von Siemens, the son of company founder Werner Siemens, and his family, for example, owned the majority of the shares in the joint-stock company Siemens & Halske, which, in turn, was the center of an international trust that employed more than eighty thousand people in 1913. As the chairman of the executive board and simultaneously as a member of the board of directors, Wilhelm von Siemens made very important decisions for the company. Often, however, a number of upper-level managers that he had selected and representatives from the banks concerned joined in the decision making.¹¹ It is impossible to assess what proportion of AGs and GmbHs did not have a clear separation between ownership and control at the top levels. And there were many variations on this type of development.

Salaried entrepreneurs were not a complete novelty in the late nineteenth century but had played a certain role from the early period of German industrialization (1830-1873). According to Hartmut Kaelble's findings, about 3 percent of the two hundred-odd Berlin firms of the time were led by salaried entrepreneurs. But they were mainly in banking, insurance, and railway companies. From early on, such managers also played an important role in the mining industry. The magnates of Silesia, for example, simply followed the traditions of agricultural management, leaving the daily management of their industrial installations and less important decisions to bourgeois managers, and concerning themselves only with essential decisions. The government administrators who managed the mines and foundries combined the roles of director and owner in the mining industry of the Ruhr that developed from the late eighteenth century onward. Thomas Mulvaney, an Irishman, and Louis Baare, former head of the railways, who had a certain business expertise, are perfect incarnations of the 1850s salaried entrepreneur. They owned no capital, yet were the directors of the mining companies Hibernia and Shamrock and the Bochumer Verein für Bergbau und Gusstahlfabrikation, respectively. When the Berlin banks finally bought the mines that Mulvaney managed in 1873, they also bought Mulvaney. This is how a certain number of men trained in law became entrepreneurs, first in the railways and banks and later in industry.¹²

(2) There is no evidence that salaried entrepreneurs were any less eager or efficient than owner-entrepreneurs in their efforts to ensure economic success. In fact, there are some indications to the contrary. No systematic

comparative analysis of the whole period is available, but the results of a comparative study of AEG and Siemens between 1880 and 1914 are instructive.¹³ These electrical power companies, the two largest in Germany, were very similar in size, in production programs, in the organization of sales, and in their overall structure. However, AEG was a company with a board of directors (with numerous investors, and power in the hands of salaried directors who had little capital), while Siemens was still a big family business even after it adopted the structure of a joint-stock company. Around 1880, Werner Siemens tried to prevent his company (founded in 1847) from diversifying into the new field of high-voltage power; he wanted to hand on to his son a company that could be managed by one man and avoid using outside investors, so that he would be master of his own empire. This hesitation gave Emil Rathenau, the salaried entrepreneur at AEG, the opportunity to expand. Within a few years, Siemens's reluctance had also put certain other business options at risk, and the company's directors quickly sought ways to make up for opportunities missed. In 1897, under pressure from the banks, Siemens became a joint-stock company, but the family held the majority of the shares and maintained great influence. This process was repeated twice over the course of mergers that took place at the beginning of the century. The management of Siemens sought cartel-type agreements in order to take over the competition and ensure lucrative prices, but it had little interest in mergers that might mean a large increase in investor capital, since this could affect the control exerted by the family. Faced with the aggressive approach of the AEG under Rathenau, which was not hampered by dynastic family interests and was expanding by buying up companies, however, Siemens and Halske soon was forced to look for opportunities to buy up or take over other firms. Otherwise, AEG, its powerful rival, would have done so, costing Siemens the vital support of the banks. Over the long term Siemens itself would have run the risk of being dominated and, in the end taken over, by AEG. Thus, for the conservative kind of company Siemens was, expansion was necessary as a defense. Siemens adopted aggressive tactics because it felt threatened, and rightly so. Both companies thus arrived at very similar expansion, diversification, and integration strategies in spite of their considerable differences in tradition, management structures, and personalities.

Two comments are in order here. First, this account shows the effect of market constraints, the straitjacket the market imposed, and the relatively small role played by motivations and personal ties of entrepreneurs operating in relatively advanced capitalist industrial systems. If a company of this type did not want to disappear from the market completely, it had to adapt to the "rules of the game," whatever the entrepreneur's non-economic motivations might be.¹⁴

Second, as far as motivations and outlook are concerned, the salaried (Rathenau) was more dynamic, enterprising, and aggressive than the owner-entrepreneur (Siemens). There is reason to believe that this was not an exception, since the differences can easily be explained: salaried managers could put more effort into expansionist policies because they were less preoccupied with non-economic questions (such as family considerations). It is quite possible that this tendency to innovate affected the highest decision-making levels, which would contradict the somber predictions of Joseph Schumpeter, who claimed that increasing rigidity would afflict the company dynamics of large modern bureaucratic firms.¹⁵

In managerial enterprises, economic motivations became the principal factor affecting decisions made at the top; such motivations were less engaged in, and perhaps less inhibited by, non-economic considerations such as family allegiances or religious beliefs, which had played a role in the work of a large number of the early owner-entrepreneurs. The motivations of these early entrepreneurs sometimes seem easier to understand than those of the salaried managers of the big companies at the turn of the century. The early entrepreneurs often considered economic success as the *means* of achieving other goals (surviving, overcoming the danger of poverty, building the family reputation, realizing religious objectives, and so on).¹⁶ In contrast, economic success became more of an *end* in itself for many managers. Profits were not any more sought as a way of satisfying their personal needs, which, indeed, were largely taken care of. It was not any more justified in family terms, either. Instead, the leaders of the large managerial enterprises sought profits in order to finance expansion, a symbol of success that in their minds and from the point of view of their peers could be measured only in terms of revenue and profits. They were struggling for expansion as a way to mark the increase in their power and to revel in it; they sought expansion for the pleasure the size of their companies would provide, and for the name they could make for themselves. Walter Rathenau, second man in the AEG hierarchy, described this expansion as an end in itself with remarkable perspicacity:

Insofar as large private owners still exist, they have long been accustomed to considering their business as an independent entity. This entity keeps its own accounts, works, grows larger, makes agreements and alliances, develops thanks to its own resources, lives for itself. The fact that it feeds its founder is not usually considered essential; it is of secondary importance. A competent businessman will limit his expenses and those of his family more than really necessary in order to have more capital available with which to support and develop his business. The growth and power of these new companies are what compensates their founder[s] This is the kind of thinking that motivates the owners of big companies.¹⁷

Such an approach oriented toward the future of the business and willing to give up short-term gains in favor of long-term success obviously was quite different from the efforts of the speculative entrepreneur, for whom the business as such was of little interest as long as the return on capital was reasonable. In its orientation toward the future, however, the managerial approach was not very different from the company politics of the traditional family business that during the preceding decades had been willing to accept short-term disadvantages for long-term continuity and security.¹⁸ But while this way of operating at least partially justified successes in non-economic (i.e. family) terms, managers that Rathenau refers to were seeking to expand for the sake of expansion, seeking success for its own sake. Many of them would have had some difficulty in justifying their efforts for expansion and economic success – which, after all, included struggles, sacrifice, and the subordination of others.

(3) There were probably other strategies of self-legitimation adopted by the managers of the period, who could not justify their claims to social rank and power through property ownership. It may well be that the thematics of economic nationalism were used to provide a purpose or at least a pretext for their efforts and their successes. To serve the national interest by increasing German power, by successfully engaging in competition in world markets, by protecting the system against internal socialist challenges – all of these were doubtless part of the discourse in frequent use. But I have no evidence showing that managers in the Kaiserreich of Wilhelm II were more (or less) nationalist than their colleagues or competitors who both controlled and owned their capital assets. Nor is there much evidence of an ideology of public welfare, either before or after the First World War, comparable to the situation in the United States during the 1920s.¹⁹

As far as relations between management and labor are concerned, the change from independent to salaried entrepreneur did not bring major changes, either. Neither was interested in sharing decision-making power with the workers; effective use of the workforce was of paramount importance for both types of company leader. It is a fact, however, that employers in the Kaiserreich differed considerably in the strategies they used to handle their workforces. Unions and collective agreements were recognized by employers in construction, printing, and numerous other sectors where businesses were small or medium-sized; they met with strong opposition in heavy industry and in the electrical and other sectors where large companies were dominant. Employers in the sectors of electrical and machine-tool manufacturing paid higher salaries and accorded better benefits than those in textiles. Regulations governing work in the Krupp factories in Essen or at the Gutehoffnungshütte in

Oberhausen were tougher and more authoritarian than those at Bosch in Stuttgart or MAN in Augsburg. When certain owners of large companies began to set up house unions within their companies in opposition to the unions and strikes of the early twentieth century, these "scab" unions differed greatly from one company to the next. As far as social programs and general politics were concerned, the owners were not a homogeneous entity.²⁰

The clear differences that can be observed in the relations between employers and workers over the course of these decades are better explained by the differences between the various sectors of industry, the rates of profit, the composition of personnel, and the differences between large and small companies than by differences between companies under private management and those with the managers. Neither in the company itself nor in the social conflicts outside do we find any evidence to support the view that salaried managers formed a "new class," an objective, rational group neutral to all parties and predisposed to resolve conflicts, a class that could have overcome the antagonisms of the system based on private capital. It suffices to consider Emil Kirdorf or Ewald Hilger, president and director-general of the Vereinigte Koenigshütte and Laurahütte in Silesia, or two of the Krupp managers, Joh. Friedrich Jencke and Alfred Hugenberg, who clearly were salaried entrepreneurs, but at the same time among the most intransigent defenders of the traditional notion of "master in his own house" over the course of the first three decades of this century, and who engaged in a kind of social politics that was more violently anti-union and reactionary than that of many owner-entrepreneurs.²¹

(4) Further research may reveal that there were, indeed, typical differences between managers and owners as far as their social roles and political attitudes and their impact on social and political life as a whole were concerned. For the moment, however, there is no clear evidence of such differences. But the rise of salaried managers may have made a significant difference from the social and political point of view in that it rendered certain types of business careers available to social classes that had hitherto been excluded.

There is no doubt that the recruitment and career of the manager differed from those of the owner-entrepreneur. Access to a position as head of a company began to depend less on ownership of capital. It became less necessary for the entrepreneur to be wealthy, or to have wealthy parents, or to go in search of wealthy associates. It is thus not surprising that access to the functions of company manager could be described in terms of "democratization."²² However, this "democratization" was clearly limited by the fact that careers now became more dependent on university qualifications

that were a much more important prerequisite for successful managers than for private owners. The study of a sample of thirteen hundred entrepreneurs for the period 1890 to 1930 shows that 52 percent of managers had a university education, compared to 37 percent of the owner-entrepreneurs. Only 5 percent of those earning salaries, compared to 10 percent of private owners, had nothing more than elementary education. The others had secondary school but no university education.²³

Another comparative study exists on well-known owner-entrepreneurs and managers born in the nineteenth century and listed in the first volumes of the *Neue Deutsche Biographie* (a general reference dictionary of biographies that is still incomplete). As Table 1 indicates, it shows even more important differences between these two categories in terms of courses of studies and diplomas.²⁴

Table 1 Level of Education Attained by German Owner-Entrepreneurs and Managers Born in the Eighteenth and Nineteenth Century

| Highest level of education attained | Owners | Managers |
|--|--------|----------|
| Apprenticeship | 55% | 15% |
| Technical or commercial studies | 13% | 21% |
| University or higher technical institute | 25% | 62% |

Source: W. Stahl, *Der Elitekreislauf in der Unternehmerschaft* (Frankfurt and Zurich, 1973), pp. 229 and 231.

A similar gap is evident in a thorough study comparing the founders and the managers of the coal and heavy industries of Westphalia between 1852 and 1914. Eighty percent of the presidents/directors-general, but less than fifty percent of the founders, had at least some university education, most of them in technical and mechanical disciplines.²⁵

If we keep in mind that access to higher education depended, for the most part, on the socioeconomic position of the father – the proportion of working-class children enrolled in the universities of the Federal Republic of Germany in the 1960s was still lower than 5 percent – then we can see that the rise of the salaried manager did not mean greater opportunities for members of the working class or the lower classes to gain access to upper-level careers in business. In fact, all our sources show that the percentage of entrepreneurs from these classes was negligible during the Industrial Revolution, and remained so through the nineteenth century and into the

early twentieth, for both owner-entrepreneurs and managers. There was one big difference between these two groups, however: managers increasingly came from families of the *Bildungsbürgertum*, i.e. from families of upper-level civil servants or the liberal professions rather than from petit bourgeois families.²⁶ Salaried entrepreneurs had more extensive education than owner-entrepreneurs and it appears that the status of their families was somewhat higher. In the Kaiserreich, a liberal outlook, democratic values, and social responsibility were not closely tied to levels of education or socio-professional status, however.

Table 2 Occupations of Fathers of German Owner-Entrepreneurs and Managers Born in the Eighteenth and Nineteenth Century

| Father's Occupation | Owner-entrepreneurs | Managers |
|--|---------------------|----------|
| Businessman | 26% | 27% |
| Liberal professional, upper-level civil servant | 19% | 40% |
| Petit bourgeois (independent craftsman, peasant, employee, merchant) | 38% | 28% |
| Lower-class craftsman | 17% | 5% |
| Worker | 1% | — |

Source: W. Stahl, *Der Elitekreislauf in der Unternehmerschaft* (Frankfurt and Zurich, 1973), pp. 126, 160.

This information is confirmed by a sample (see Table 3; absolute figures) from Westphalia that is less elitist than the sample from the *NDB*.

Table 3 Occupations of Fathers of Westphalian Entrepreneurs in Mining, Iron, and Steel, 1852-1913

| Father's Occupation | Founders | Board Members | Presidents/ Directors-General |
|-----------------------------------|----------|---------------|----------------------------------|
| Businessman | 14 | 26 | 53 |
| Civil servant or military officer | 2 | 1 | 30 |
| Other liberal professional | 1 | 1 | 10 |
| Engineer or skilled craftsman | 2 | 1 | 3 |
| Worker | — | — | — |
| Other | 7 | 8 | 16 |
| Unknown | 13 | 9 | 51 |
| Total | 39 | 46 | 163 |

Source: T. Pierenkemper, *Die westfälischen Schwerindustriellen, 1852-1913: Soziale Struktur und unternehmerischer Erfolg* (Göttingen, 1979), p. 44.

(5) It is difficult to establish a general overview of the careers of these salaried managers.²⁷ On average, they became heads of companies later in life (on average at thirty-nine) than owner-entrepreneurs (twenty-nine).²⁸ In contrast to the owner-entrepreneurs, who were much less mobile, a notable minority of the salaried managers came from a region other than where the business was located.²⁹ Because of the great emphasis placed on the content and extent of the manager's educational background, it is clear that promotions of workers to the rank of director-general were extremely rare. But it also was becoming increasingly common for personnel with secondary or university qualifications to start at a relatively low level of employment and gradually climb up the hierarchy and sometimes reach the level of the board of directors. Two-thirds of the individuals in the sampling from Westphalia started with low or average salaries, and only one-third (especially in coal mining) began at the management or senior-management level.³⁰ Over the course of the first years they might change companies several times, but the more senior they became the more likely they were to stay with the same company. In the Westphalian sample, 39 percent worked for the same company all their lives; on average, the presidents/directors-general held 3.3 positions (a figure that tended to increase slightly). It was rare for someone to come in from another industry, or leave their own; only 29 of a total of 160 general managers did so in our sampling, and these more mobile managers were not the most successful.³¹ While owner-entrepreneurs tried to stay in their positions after the age of sixty-five, managers in the coal mines and steel mills of Westphalia retired at that age, like civil servants, and unlike British steel and textile industrialists.³² Many, in fact, especially in coal mining, were former civil servants. When they took on better-paying positions in company management, they brought with them their experience of bureaucracy, their own particular expertise (often in law), their connections, and their knowledge of bureaucratic organization.³³

(6) The role played by elements such as training and education, relative stability, promotion up the different levels of the hierarchy, salaried employment, seniority serving to establish levels of income, and retirement at age sixty-five was similar to the ideal type of bureaucracy described by Max Weber on the basis of his experience with German institutions, particularly in the public sphere.³⁴ The bureaucratic aspects in the big companies at the turn of the century were due in part to internal changes at the heart of industry but also were a result of external influences: unlike England and the United States, Germany had a powerful system of public administration that had been developed and put in place well before industrialization,

and this administrative system continued to have an influence on industrial expansion in many different areas and many different ways.³⁵

These managers at the top of big companies usually did not behave like careful bureaucrats; they were entrepreneurs. Nevertheless, certain elements of bureaucracy seem to have been integrated in the values and attitudes of many of them. This may have contributed to the development of a specific kind of *esprit de corps* as well as specific rules regulating behavior. Fraud and dishonest practices were irreconcilable with these norms and with their professional codes. In addition, more effective legal regulations and the increasing capacity for controls as well as improved transport and communications systems ensured that the manager – contrary to the fears expressed above – ran no greater risk of engaging in dishonest practices with business partners, clients, or the investing public than did the traditional owner-entrepreneur. In fact, around 1900 there was a noticeable decrease in accusations of this kind directed against big companies and their directors.

Nevertheless, managers were directors of private companies in a capitalist system, and this implied clear limits to bureaucratization, especially at the upper levels. Contrary to the requirements in government administration, a university education was not absolutely necessary. Many people rose to the level of board members without a diploma. As late as 1953, almost one-third of an extensive sampling of members of boards of directors and company owners held no diploma of any kind, while some 31 percent had technical or engineering qualifications from a technical university, 17 percent had a diploma in economics, and 19 percent had law degrees.³⁶ Demotion was rare but did occur.³⁷ Particularly in small companies, stable employment was never guaranteed. Further, recruitment at the level of company director had many nonbureaucratic elements. The director-general would often choose a “young” successor, often a son or another relative or a close friend, and ensure that this person was trained within the company in order to direct it later. This procedure derived from the idea that a specialist who had climbed the ladder of the hierarchy was no more likely to become a good company director than a good bureaucrat was to become a wise politician. Family connections and relations, in a broad sense, as well as all kinds of unofficial personal contacts continued to play an important role in the way individuals were selected for the highest positions. Clearly, specialized knowledge and professional expertise were not considered sufficiently important (though perhaps necessary) qualifications; other qualities, subjectively considered necessary in a “company director” and difficult to assess, were also required. As long as nepotism was practiced with a certain moderation, it did not have a dysfunctional effect on companies.

Unstructured methods of communication and coordination predominated at the upper levels of the large companies even as the middle and lower ranks of industrial organization became increasingly bureaucratic. The management techniques of successful managers differed significantly from the bureaucratic model, in which problems were solved using procedures within clearly structured and assigned systems of authority and separate competencies. There were many situations in which successful managers had to be nonbureaucratic, highly flexible, able to by-pass established channels of communication, market-oriented, and "political" (in the sense that they engaged in direct negotiations and transactions with official organizations). This marked the clear limits of the bureaucratization processes that characterized the structures and strategies of large companies at the turn of the century, and affected the positions and the management strategies of a growing number of managers.

(7) The observable changes in the way managers were selected did not lead to "democratization" in the access to such positions, nor did they lead to the complete bureaucratization of the management structures of large companies, even though certain tendencies in this direction, due to both internal and external forces, were clearly visible; this is what the previous two sections were trying to show. There is little doubt, however, that with the gradual rise of the manager, entrepreneurship was less dependent on owning capital; there were more opportunities for individuals who were specialists in technical fields, business, law, or administration to reach the upper levels of management. Thus the management of the large modern companies gained access to and was influenced by specialized knowledge to a perhaps greater degree than the companies that continued to be run by their owners. Once the traditional connection with ownership was set aside, the work accomplished became a more important criteria than it had been when ownership and management were one and the same. Although our sources do not allow us to conclude that this state of affairs brought with it a change in the *objectives* of the management, it may well have encouraged tendencies toward professional, structured, and systematic management, that is, the rationalization of *strategies* implemented to attain these objectives. Again, there is not enough detailed source material available. There is no doubt, however, that the large German companies introduced aspects of Taylorism at the production level well before the concept, imported from the United States, became a slogan in German discussions (around 1910). They put in place sophisticated organizational systems in order to establish and control highly integrated and diversified concerns; these systems touched many different areas – from procurement of raw materials to wholesale, and sometimes even retail sales as well as many aspects of production.

More than their British or French contemporaries, German company managers put increased emphasis on the “sciences,” at first in production, much later in marketing, and only minimally in the domain of general administration.³⁸ There was more than one reason for this, but it is certain that the development of a postsecondary system of education in the technical fields plays a large role in explaining this phenomenon. It is also probable that the early emphasis on sciences, professionalization, and systematic administration had a lot to do with the rise of salaried entrepreneur. In their case, selection and personal legitimation were not intimately tied to the ownership of capital; criteria such as technical training acquired according to the rules, professional success and specialized competencies played determining roles. To fully test this hypothesis, one would need systematic comparisons of the structures and strategies in companies run by boards of directors and those run by families.

It appears, then, that neither the negative nor the positive ideas associated with the rise of the manager and sketched out at the beginning of this essay have had much foundation.

It is true that there was an obvious change in the recruitment, educational background, and careers of entrepreneurs once companies managed by boards of directors began to complement and replace family businesses. But as far as the materials at our disposal show, this did not bring with it a marked change in economic objectives. The one change that can be noted is the more aggressive and dynamic approach to management, less inhibited by non-economic motivations. The rise of salaried managers did not have an important effect in social or political terms, either. In particular, changes in methods of recruitment did not mean “democratization” in the access to upper-level positions in business; similarly, higher levels of education did not bring with them more liberal attitudes as far as social conflicts or political reform were concerned.

In all probability, the rise of the managers had an effect on the structures and strategies that were put in place to achieve the objectives of large companies. The importance assigned early on to scientific procedures in industry, the early development of systematic administration, a marked tendency toward mergers on a grand scale and integrated companies, and also the intrinsic cooperation between banks and industrial enterprises – a subject we have not touched on in this essay – all these developments seem to be linked to the rise of the managers. Indeed, the rise of the manager was part of the approach to modernization in the Germany under Wilhelm II; it contributed to the rapid growth of the economy without putting into question too much of the traditional social and political structures.

Notes

1. The functions of the entrepreneur include fundamental ("strategic") decisions about company objectives, the company's position in the marketplace and its relations with its economic and social milieu. Such decisions include those on the mobilization and combination of the factors of production, especially decisions on investments, allocation of resources, and hiring of new management staff. Cf. A.D. Chandler and F. Redlich, "Recent Developments in American Business Administration and their Conceptualization," *Business History Review* 35 (1961): 1-27 (esp. 24ff).
2. The entrepreneur's authority includes an ability to have orders and decisions followed by those employed, even in the face of divergent interests and opposition.
3. N. Reich, "Die Entwicklung des deutschen Aktienrechtes im neunzehnten Jahrhundert," *Ius commune* (1969): 239-76.
4. See H. Böhme, "Emil Kirdorf," *Tradition* 13 (1968): 284ff and *ibid.* 14 (1969): 290 ff; J. Kocka, "Industrielles Management: Konzeptionen und Modelle in Deutschland vor 1914," *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 56 (1969): 341ff.
5. Much evidence in F. Kuh, *Der selbstständige Unternehmer* (Berlin, 1918). Cf. the articles on "Unternehmer" and "Manager" by F. Redlich and E. Salin, *Handwörterbuch der Sozialwissenschaften*, vols. 7 and 10 (Tübingen/Göttingen, 1959-1961).
6. See G. Schmoller, "Wesen und Verfassung der grossen Unternehmungen," in: *idem, Zur Sozial- und Gewerbepolitik der Gegenwart* (Leipzig, 1890), pp. 388-94. A critical study of certain attitudes toward salaried entrepreneurs is available in H. Pross, *Manager und Aktionäre in Deutschland* (Frankfurt, 1965), pp. 12-14. For a discussion of the clash between Marxist class theory and the growing gap between ownership and control, see R. Dahrendorf, *Class and Class Conflict in Industrial Society* (Stanford, 1959), chaps. 1 and 4.
7. See W. Rathenau, *Von kommenden Dingen* (Berlin, 1918), p. 140ff; W. Rathenau, *Reflexionen* (Leipzig, 1912), p. 81ff; W. von Moellendorff, *Deutsche Gemeinwirtschaft* (Berlin, 1916).
8. *Statistik des deutschen Reichs* (1907), vol. 214, tab.12; *Statistisches Jahrbuch für das deutsche Reich* (1908), vol. 29, pp. 326-27, and (1910) vol. 31, p. 345.
9. I mean salaried entrepreneurs with functions as heads of companies as defined in Note 1, above.
10. This calculation is based on the assumption that each company consisted of two units in the case of joint-stock companies and 1.1 units in the case of privately owned companies, per average. For additional figures, see W. Sombart, *Der moderne Kapitalismus*, vol. 3 (Munich, 1927), p. 213ff; R. Passow, *Die wirtschaftliche Bedeutung und Organisation der Aktiengesellschaften* (Jena, 1907), pp. 7-12; Statistisches Bundesamt, ed., *Bevölkerung und Wirtschaft, 1872-1972* (Stuttgart/Mainz, 1972), p. 172ff.
11. See also the concept "entrepreneurial enterprise," denoting an intermediary stage of company development, between "personal" and "managerial enterprise," in A.D. Chandler and H. Daems, "Introduction," in *The Rise of Managerial Capitalism*, ed. H. Daems and H. Van der Wee (The Hague, 1974), p. 6; the development of Siemens is discussed in J. Kocka, *Unternehmensverwaltung und Angestelltenschaft am Beispiel Siemens, 1847-1914* (Stuttgart, 1969), ch. 3.
12. See J. Kocka, *Unternehmer in der deutschen Industrialisierung* (Göttingen, 1975), p. 54.
13. See chapter 3 above.
14. This mechanism worked only under certain conditions, however: 1) considerable capital investment in the companies concerned that prevented quick transfers to other markets and required the total and regular exploitation of production facilities.

- ties; 2) the lack of clear relative advantages for production and marketing (for example, strong patents) in the companies concerned; and 3) the presence of aggressive competition that was powerful and numerous enough, that was not hampered by non-economic considerations, and that launched dynamic expansion initiatives, forcing the others to do the same.
15. See J. Schumpeter, "Der Unternehmer in der Volkswirtschaft von heute," in *Strukturwandlungen der Deutschen Volkswirtschaft*, ed. B. Harms (Berlin, 1928), vol. 1, pp. 295-312.
 16. Cf. chapters 2 and 4 above.
 17. Rathenau, *Von kommenden Dingen*, p. 144. This is what Sombart has criticized as an example of alienation: see W. Sombart, *Der Bourgeois* (Munich and Leipzig, 1913), p. 212ff.
 18. See personal letter from Werner Siemens to his brother in 1884: "It is very pleasant to just make money, but this is not what our company is based on nor will it guarantee its survival. But I hope to keep at least our business in Berlin solidly in the hands of the family" (C. Matschoss, ed., *Werner Siemens* [Berlin, 1916], p. 837).
 19. See C.C. Ling, *The Management of Personnel Relations: History and Origins* (Homewood, IL, 1965); G.E. Kahler and A.C. Johnson, *The Development of Personnel Administration, 1923-1945* (Madison, 1971).
 20. See L. Puppke, *Sozialpolitik und soziale Anschauungen frühindustrieller Unternehmer im Rheinland und Westfalen* (Cologne, 1966); H. Kaelble, *Industrielle Interessenpolitik in der Wilhelminischen Gesellschaft: Centralverband Deutscher Industrieller, 1895-1914* (Berlin, 1967); K. Mattheier, *Die Gelben. Nationale Arbeiter zwischen Wirtschaftsfrieden und Streik* (Düsseldorf, 1973); H. Jaeger, *Unternehmer in der deutschen Politik, 1890-1918* (Bonn, 1967); K. Saul, *Staat, Industrie, Arbeiterbewegung im Kaiserreich: Zur Innen- und Aussenpolitik des Wilhelminischen Deutschland, 1903-1914* (Düsseldorf, 1974); G. Adelman, *Die soziale Betriebsverfassung des Ruhrbergbaus vom Ausgang des 19. Jahrhunderts bis zum Ersten Weltkrieg* (Bonn, 1962).
 21. On Kirdorf, see Böhme, "Emil Kirdorf"; on Jencke, see W. Boelcke, ed., *Krupp und die Hohenzollern in Dokumenten* (Frankfurt, 1970), pp. 118-34 and 277; on Hugenberg, see D. Guratzsch, *Macht durch Organisation* (Düsseldorf, 1973); on Hilger, see A. Perlick, *Oberschlesische Berg- und Hüttenleute* (Kitzingen, 1953), p. 161ff.
 22. See Sombart, *Der moderne Kapitalismus*, vol. 3, p. 19ff.
 23. H. Sachtler, *Wandlungen des industriellen Unternehmers in Deutschland seit Beginn der Industrialisierung* (thesis, Halle, 1937), p. 41 (examines three hundred presidents/directors-general and owner-entrepreneurs listed in the *Reichshandbuch der deutschen Gesellschaft* [Berlin, 1930-1931]).
 24. W. Stahl, *Der Elitekreislauf in der Unternehmerschaft* (Frankfurt and Zurich, 1973), pp. 229 and 231.
 25. T. Pierenkemper, *Die westfälischen Schwerindustriellen, 1852-1913. Soziale Struktur und unternehmerischer Erfolg* (Göttingen, 1979), p. 60.
 26. See Stahl, *Der Elitekreislauf*, pp. 126, 160.
 27. The following text is based on Kocka, *Unternehmensverwaltung*, pp. 383-459; W. Rathenau, "Geschäftlicher Nachwuchs," in idem, *Zur Kritik der Zeit* (Berlin, 1912), pp. 206-18; Sombart, *Der moderne Kapitalismus*, vol. 3, pp. 3-22 and 736-47; H. von Beckerath, *Der moderne Industrialismus* (Jena, 1930), pp. 37ff, 58ff and 231ff; K. Weidenfeld, *Das Persönliche im modernen Unternehmertum* (Leipzig, 1911), p. 101ff.
 28. Stahl, *Der Elitekreislauf*, pp. 242, 244ff.
 29. Ibid., p. 191: 31 percent of managers, 17 percent of the owners. Pierenkemper, *Die westfälischen Schwerindustriellen*, p. 39ff: 11 of 27 founders and 10 of 35 board members but only 35 of 140 directors were born in the region of the Ruhr.
 30. Pierenkemper, *Die westfälischen Schwerindustriellen*, p. 78ff.
 31. Ibid., pp. 82ff, 163ff.

32. Ibid., p. 85ff. The comparison with England is based on C. Erickson, *British Industrialists: Steel and Hosiery, 1850-1950* (London, 1959), p. 75.
33. See W. Fischer, *Wirtschaft und Gesellschaft im Zeitalter der Industrialisierung* (Göttingen, 1972), p. 194ff.
34. See M. Weber, *Wirtschaft und Gesellschaft* (Cologne, 1964), p. 160ff.
35. See J. Kocka, "Vorindustrielle Faktoren in der deutschen Industrialisierung: Industriebürokratie und 'neuer Mittelstand,'" in *Das Kaiserliche Deutschland*, ed. M. Stürmer (Düsseldorf, 1970), pp. 265-86.
36. H. Hartmann, "Die Akademiker in der heutigen Unternehmerschaft," *Tradition* (1959): 133-48.
37. Pierenkemper (*Die westfälischen Schwerindustriellen*, p. 86) notes only one case out of a total of about 160.
38. For more on these tendencies, see Kocka, *Unternehmer*, p. 110ff.

Chapter 7



Big Business and the Rise of Managerial Capitalism

Germany in International Comparison

Translated from the German by Jeremiah Riemer

In 1906 the German liberal journalist and politician Friedrich Naumann wrote: "The idea of organization, the regulation of the crowd, is coming to penetrate all relations. It is becoming a matter of pride for people to be located in large business firms, to be drawn into wide affiliations. Often, still, this pride is combined with a painful glance backward to a time when the individual himself was something ... All segments of the people are stepping forward with demands upon the state ... The state and the associations are becoming economic factors, of whose necessity one is convinced ... Business management is taken out of the hands of the producer and given away – partly to associations, partly to the state. The number of persons managing the economy becomes ever smaller ... What grows more widespread is a spirit of commitment to a dark totality encompassing us all."¹

At about the same time, Max Weber was developing his analyses of bureaucracy. His fascination with the efficiency of bureaucratic administration was combined with mistrust of the "bureaucratic clench" upon the individual now emerging as a threat to liberty. Weber analyzed how and why a specific type of *formal organization* was increasingly taking over the distribution of society's resources and the coordination of social relations – and how it thereby augmented the distributive and coordi-

nating mechanism of the *market* while also restricting and narrowing *spontaneity* and *decentralization*.²

These statements by Naumann and Weber could be augmented by the voices of other contemporaries.³ Using different language, they are all preoccupied with a fundamental transformation in the capitalist economy and bourgeois society of their time, with a cluster of changes that could be observed in the advanced industrial countries of Europe and North America and that have persisted into our own time. They are preoccupied with a tendency toward the conscious, collective, formal organization of relations previously regulated wholly or in large part by the market, or according to traditional communal principles, or that had remained decentralized and uncoordinated.

This tendency toward organization manifested itself in various spheres of life.⁴

The network of numerous small and medium-size businesses was pervaded and influenced by blocs of big businesses growing in size and scope, especially in industry, transportation, banking, and other service sectors. Businesses struck deals and combined into cartels, syndicates, and conglomerates, supplementing and altering the market principle of competition via self-organization. Oligopolistic and monopolistic relations of dependency arose. In the large enterprises, it became increasingly frequent for salaried entrepreneurs, also called "managers," to take charge. The role of capitalist and the role of entrepreneur moved a good distance apart. In the large enterprises, the functional division of labor and hierarchical scale became more differentiated, sharper, and more formalized. In production, later in sales, and finally inside the company administration, science became increasingly important. The internal structure of large private enterprises came to resemble the internal structure of large public agencies.

Such far-reaching changes in production and utilization led to far-reaching changes in social stratification. On the one hand, new leadership strata emerged: the managers, executives, and upper ranks of the "technical-scientific intelligentsia." On the other hand, the expansion of those in fields not directly involved in production led to an over-proportional increase in the number of white-collar employees in lower- and mid-level ranks. The labor market, class conflicts, and other interest conflicts were also affected as the principle of conscious, collective organization increasingly supplemented the principles of individual competition, exchange, and contract, the so-called "free play of forces"; ever larger and more comprehensive interest organizations took shape. While the basic structural principles of capitalism were upheld, there was a strengthening of tendencies toward tighter links and webs between the socioeconomic and governmental spheres. Reversing the defining tendency of the second

third of the nineteenth century, and going some way toward abandoning classical liberal economic ideals, the government again began to take on a growing number of responsibilities for regulating the economy and social relations (in Germany this resumed during the 1870s). Gradually, the instruments of economic policy and state-sponsored social welfare policy were extended. Government decisions and actions – within a public administration that was gaining power as it restructured itself, in parliaments whose functions increased, and in parties that were gaining mass constituencies and cooperating with interest groups – became more and more important for what happened in the economy and society. This heightened the incentive for economic and social interests to exercise influence upon decisions and actions of state. Since the late nineteenth century, phenomena like the growing collective organization of interests and the personnel linkages between public and private authorities reflected increased blurring of the lines between private and public power.

Additional aspects of these general organizational tendencies could be enumerated, in such fields as the political system, culture, and political ideas. One would then have to discuss the interrelatedness between the processes of change merely enumerated here, and to investigate their causes, among which disturbances of market equilibrium and social conflicts played a prominent (though not exclusive) role. Further, one would have to work out how it was that all these organizational tendencies (before and after 1914), even though they kept getting stronger all the time, remained partial and quite incomplete. In the countries of interest to us here (western and central European and North American), the principle of the market was not superseded but supplemented and overlaid; spontaneity was not extinguished, there remained immense deficiencies in coordination, and the entire process continued to evade organizational planning and control. International comparison would show that these growing tendencies toward organization varied along lines of strength, chronology, and type and that these variations were defined by different prior industrial histories, by persistent pre-industrial “structural remnants” and traditions, as well as by transcultural and international influences. One would have to develop a typology of variations in the growth of “organized capitalism.” One would have to distinguish between a variant tending toward organization with the assistance of the state (for example, Germany) and a variant with a strong inclination toward self-organization under the decisive direction of big business (for example, the United States); but also between cases and phases in which these comprehensive organizational tendencies took place while upholding liberal-democratic conditions and cases in which authoritarian-dictatorial alternatives triumphed (as in the case of German fascism). One would have to work out phases of development for

organized capitalism, with the First World War and the global economic crisis around 1930 as phases of special acceleration. One would have to discuss the apparent end or incipient reversal of those trends toward more organization in the 1980s and 1990s.

This is not the place for all that. Instead, the following will discuss *one* central component of the pattern of change just sketched, namely, the development of large business enterprises. The development of the large German enterprises in the late nineteenth century and early twentieth will be discussed from an international comparative perspective, on the basis of newly collected data, and in light of the questions just posed. Finally, a few general conclusions shall be drawn about the development of organized capitalism in Germany.

1. The growth of average business size is hard to document. Official German statistics record that in 1882 only 1.9 percent of all employees in the sector "Industry and Crafts" worked in huge plants with more than one thousand persons; by 1895 this share came to 3.3 percent; by 1907, 4.9 percent; by 1925, 6.8 percent; and by 1950, 13.5 percent. Conversely, the share of those gainfully employed in small plants with up to ten persons was halved from 64.2 to 33 percent, between 1882 and 1925. The share of those working in medium-size plants (11 to 200 employees) likewise rose: from 24.8 percent in 1882 to 42 percent in 1925.⁵

However, this statistic counts plants (that is, technical units) but not enterprises (economic and decision-making units). Many enterprises owned several plants; business concentration cannot be measured this way. A more powerful indicator would be a comparison of the one hundred largest German industrial and mining enterprises in the years 1887, 1907, and 1927. Data on these large businesses were systematically surveyed at the University of Bielefeld in the 1970s using company commemorative publications, stock exchange handbooks, monographs on firms, sectoral investigations, and the like as a statistical foundation. The measure used for size of enterprise was capital (nominal capital for joint-stock companies). Enterprises were defined as economic and decision-making units that were structured primarily according to principles of formal organization but that interacted with each other primarily according to market rules. Tables 1, 2, and 3 summarize some of the results.⁶

In 1887 these hundred largest enterprises had average capital of 9.4 million marks; by 1907 they had 26.8 million marks, and by 1927, 59.2 million marks, with inflation explaining only a small portion of this growth. In 1887 a business with 3.8 million marks of capital could belong to the top-hundred group, while by 1907 at least 10 million marks were required and by 1927 at least 13 million marks. Clearly, the jump from 1887 to 1907 was bigger than the jump from 1907 to 1927.

Table 1 Characteristics of the One Hundred Largest German Enterprises (Industry and Mining) by Branch in 1887

| Industrial category | Average capital in millions of marks | Number of enterprises | Diversification | | | | Integration | | | | | | | Legal form | | | | |
|--|--------------------------------------|-----------------------|--|----|----|---|--|-----|------|-----|----|----|-----|-----------------|------------------|-------------------|-----------------|-----------------|
| | | | A = 1 product line B = 2-4 C = 5-9 D = 10 or more | | | | a = raw materials b = production c = distribution d = syndicate | | | | | | | AG ¹ | Gew ² | GmbH ³ | KG ⁴ | PG ⁵ |
| | | | A | B | C | D | ab | abc | abcd | abd | b | bc | bcd | bd | | | | |
| Mining | 7.6 | 24 | 7 | 17 | - | - | 16 | 2 | - | - | 6 | - | - | - | 18 | 5 | - | 1 |
| Stone- and earthworking | 5.7 | 3 | - | 2 | 1 | - | 3 | - | - | - | - | - | - | - | 1 | - | - | 2 |
| Iron and metal production, metal goods | 13.9 | 32 | 1 | 11 | 16 | 4 | 21 | 2 | - | 5 | 3 | - | - | 1 | 23 | 1 | - | 8 |
| Machines, apparatuses, vehicles (excluding electrical) | 7.3 | 12 | - | 1 | 7 | 4 | 1 | - | - | - | 9 | 2 | - | - | 9 | - | - | 3 |
| Electrical industry | 17.5 | 2 | - | 1 | - | 1 | - | 1 | - | - | - | 1 | - | - | 1 | - | - | 1 |
| Chemical industry | 8.7 | 12 | 3 | 8 | 1 | - | 5 | - | - | 2 | 2 | 3 | - | - | 12 | - | - | - |
| Textile industry | 5.0 | 5 | 1 | 4 | - | - | - | - | - | - | 5 | - | - | - | 5 | - | - | - |
| Rubber industry | 4.5 | 1 | - | 1 | - | - | - | - | - | - | - | 1 | - | - | 1 | - | - | - |
| Wood and carved materials | 4.9 | 1 | - | 1 | - | - | - | 1 | - | - | - | - | - | - | 1 | - | - | - |
| Foodstuffs and semiluxury food, drink, tobacco, etc. | 4.4 | 8 | 4 | 4 | - | - | 2 | - | - | - | 2 | 4 | - | - | 8 | - | - | - |
| Total (1887) | 9.4 | 100 | 16 | 50 | 25 | 9 | 48 | 6 | - | 7 | 27 | 11 | - | 1 | 79 | 6 | - | 15 |

1 AG = joint-stock company (*Aktiengesellschaft*)
 2 Gew = mining law union (*bergrechtliche Gewerkschaft*)
 3 GmbH = limited-liability company (*Gesellschaft mit beschränkter Haftung*)
 4 KG = partnership in command (*Kommanditegesellschaft*)
 5 PG = partnership (*Personalgesellschaft*)

Table 2 Characteristics of the One Hundred Largest German Enterprises (Industry and Mining) by Branch in 1907

| Industrial category | Average capital in millions of marks | Diversification | | | | Integration | | | | | | | | Legal form | | | | |
|---|--------------------------------------|--|----|----|----|-------------|-----|------|-----|----|----|-----|----|-----------------|------------------|-------------------|-----------------|-----------------|
| | | A = 1 product line B = 2-4 C = 5-9 D = 10 or more | | | | ab | abc | abcd | abd | b | bc | bcd | bd | AG ¹ | Gew ² | GmbH ³ | KG ⁴ | PG ⁵ |
| | | A | B | C | D | | | | | | | | | | | | | |
| Mining | 25.3 | 3 | 17 | 3 | - | 3 | 1 | 2 | 14 | - | - | - | 3 | 11 | 8 | 1 | - | 3 |
| Stone- and earthworking | 13.2 | - | 3 | - | - | - | 2 | - | 1 | - | - | - | - | 3 | - | - | - | - |
| Iron and metal production, metal goods | 36.7 | - | 1 | 19 | 11 | 1 | 1 | 7 | 20 | 2 | - | - | - | 25 | 2 | 2 | - | 2 |
| Machines, apparatuses, vehicles (excluding electrical) | 15.1 | - | 2 | 7 | 4 | - | - | - | 2 | 6 | 4 | 1 | - | 11 | - | - | - | 2 |
| Electrical industry | 78.4 | 4 | - | - | 4 | - | - | 1 | - | - | 2 | 1 | - | 4 | - | - | - | - |
| Chemical industry | 16.1 | 17 | 13 | 3 | - | 1 | 3 | - | 8 | 2 | 2 | - | 1 | 16 | - | 1 | - | - |
| Textile industry | 14.2 | 3 | 1 | 2 | - | - | - | - | - | 2 | 1 | - | - | 2 | - | - | 1 | - |
| Paper and printing industry | 17.6 | 2 | - | - | - | 1 | - | - | - | - | 1 | - | - | 1 | - | 1 | - | - |
| Foodstuffs and semiluxury food, drink, tobacco, etc. | 14.6 | 4 | 4 | - | - | - | - | - | - | - | 4 | - | - | 4 | - | - | - | - |
| Total (1907) | 26.8 | 100 | 5 | 44 | 32 | 19 | 6 | 7 | 45 | 12 | 14 | 2 | 4 | 77 | 10 | 5 | 1 | 7 |

1 AG = joint-stock company (*Aktiengesellschaft*)2 Gew = mining law union (*bergrechtliche Gewerkschaft*)3 GmbH = limited-liability company (*Gesellschaft mit beschränkter Haftung*)4 KG = partnership in command (*Kommanditgesellschaft*)5 PG = partnership (*Personengesellschaft*)

Table 3 Characteristics of the One Hundred Largest German Enterprises (Industry and Mining) by Branch in 1927

| Industrial category | Average capital in millions of marks | Number of enterprises | Diversification A = 1 product line B = 2-4 C = 5-9 D = 10 or more | | | | Integration a = raw materials b = production c = distribution d = syndicate | | | | | | | | Legal form | | | | |
|--|--------------------------------------|-----------------------|---|----|----|----|---|-----|------|-----|---|----|-----|----|-----------------|------------------|-------------------|-----------------|-----------------|
| | | | A | B | C | D | ab | abc | abcd | abd | b | bc | bcd | bd | AG ¹ | Gew ² | GmbH ³ | KG ⁴ | PG ⁵ |
| Mining | 65.3 | 9 | - | 4 | 2 | 3 | - | - | 7 | 2 | - | - | - | 6 | 1 | 2 | - | - | |
| Stone- and earthworking | 22.1 | 5 | - | 3 | 2 | - | - | 2 | - | 3 | - | - | - | 5 | - | - | - | - | |
| Iron and metal production, metal goods | 82.5 | 22 | - | 2 | 7 | 13 | 1 | 1 | 12 | 2 | 1 | 5 | - | 20 | - | 2 | - | - | |
| Machines, apparatuses, vehicles (excluding electrical) | 27.2 | 20 | - | 6 | 6 | 8 | - | - | 2 | 1 | 6 | 11 | - | 15 | - | 2 | 2 | 1 | |
| Electrical industry | 99.6 | 5 | - | 2 | - | 3 | - | - | 1 | - | - | 2 | - | 5 | - | - | - | - | |
| Chemical industry | 132.6 | 13 | - | 6 | 4 | 3 | - | - | 4 | 5 | - | 4 | - | 13 | - | - | - | - | |
| Textile industry | 27.5 | 10 | - | 4 | 6 | - | - | 1 | - | - | 2 | 5 | 1 | 9 | - | 1 | - | - | |
| Paper and printing industry | 26.4 | 3 | - | 1 | 2 | - | - | 2 | - | - | - | 1 | - | 2 | - | 1 | - | - | |
| Leather and linoleum, shoes | 17.7 | 4 | 1 | 3 | - | - | - | - | - | - | - | 4 | - | 4 | - | - | - | - | |
| Rubber industry | 34.1 | 1 | - | 1 | - | - | - | 1 | - | - | - | - | - | 1 | - | - | - | - | |
| Foodstuffs and semiluxury food, drink, tobacco, etc. | 22.4 | 8 | - | 4 | 4 | - | ' | - | - | - | - | 6 | - | 8 | - | - | - | - | |
| Total (1927) | 59.2 | 100 | 1 | 36 | 33 | 30 | 3 | 7 | 26 | 13 | 9 | 38 | 3 | 1 | 88 | 1 | 8 | 2 | 1 |

1 AG = joint-stock company (Aktiengesellschaft)

2 Gew = mining law union (bergrechtliche Gewerkschaft)

3 GmbH = limited-liability company (Gesellschaft mit beschränkter Haftung)

4 KG = partnership in commendam (Kommanditgesellschaft)

5 PG = partnership (Personengesellschaft)

If one measures according to workforce size, one finds Krupp in the lead in 1887, with 64,000 employees, and Siemens close behind, with 30,000. In 1927 the Vereinigte Stahlwerke (United Steelworks) were in the lead, with almost 200,000 employees, ahead of Siemens (with 116,000) and IG Farben (with 80,000).⁷

The highest levels of average capital and the largest individual enterprises in all three sample years were to be found in mining, iron/metal production, and the "new industries" of electrical manufacturing and chemicals. In 1887 and 1907, as Table 4 summarizes, four-fifths of the hundred largest were in iron and steel production, mining, chemicals, and mechanical engineering (constant rank order). Production-goods industries, quite clearly, ranked ahead of consumer-goods industries. This distinguished the German pattern a bit from the contemporaneous American one, in which businesses in the category "foodstuffs and semiluxury foods, drink, tobacco, etc." were better represented among the hundred largest. There was even greater difference between Germany and England, where the majority of the fifty largest were in consumer goods: two-fifths in "foodstuffs and semiluxury foods, drink, tobacco, etc." and up to one-fifth in textiles. While in Germany mergers and related shifts caused the share of consumer-goods industries among the top hundred to rise between 1907 and 1927, in England the share of production-goods industries among leading businesses increased in the 1920s. German-British differences were, therefore, smaller by the end of the 1920s than before the First World War.⁸

Table 4 Distribution of the One Hundred Largest German Enterprises (Industry and Mining) by Branch in 1887, 1907, 1927

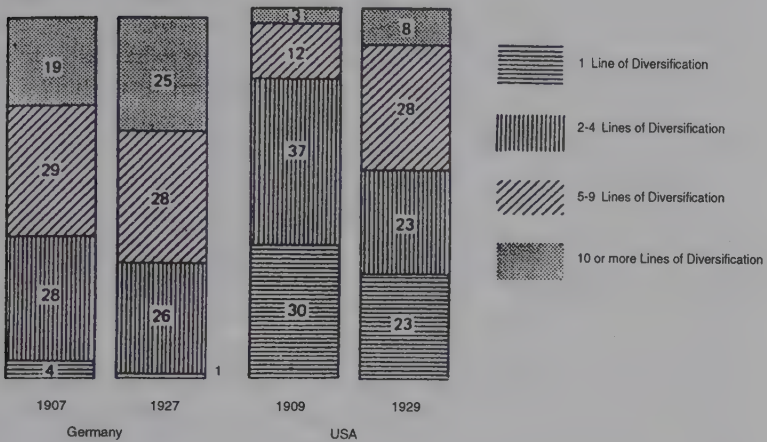
| | | | | | |
|---|------|--|------|--|------|
| 1. Iron and metal production | (32) | Iron and metal production | (31) | Iron and metal production | (22) |
| 2. Mining | (24) | Mining | (23) | Machines etc. | (20) |
| 3. Chemicals | (12) | Chemicals | (17) | Chemicals | (13) |
| 4. Machines etc. | (12) | Machines etc. | (13) | Textiles | (10) |
| 5. Foodstuffs and semiluxury food, drink, tobacco, etc. | (8) | Foodstuffs and semiluxury food, drink, tobacco, etc. | (4) | Mining | (9) |
| 6. Textiles | (5) | Electrical industry | (4) | Foodstuffs and semiluxury food, drink, tobacco, etc. | (8) |

2. The gradual shift from "market" to "organization" may be tracked most easily by looking at the growing functional integration of big businesses. By "functional integration" we mean (in the case of manufactur-

ing enterprises) a strategy expanding the enterprise's functional domain so that the enterprise, in addition to producing production or consumer goods, pursues both backward integration (raw and semifinished materials processing) and forward integration into sales and marketing.⁹ "Functional integration" therefore means that such diverse functions as raw materials processing, production, distribution, transport, financing – which in earlier times had more often been taken care of by independent, functionally specialized enterprises doing business with each other according to market rules – from now on become united within one enterprise. The trend this facilitates is for coordination via formal organization and management to replace coordination via the market. In Tables 1-3, the abbreviation "b" means a pure manufacturing enterprise (in mining: a pure excavation enterprise); "ab" means a manufacturing enterprise integrating raw materials; "bc" and "bd" categorize manufacturing enterprises with "forward" integration, either via a firm's own distribution organization (bc) or via membership in a syndicate, (that is, in a cartel with its own sales establishment; [bd]); "abc" and "abcd" denote variants of full-scale integration.

There were only twenty-seven pure production enterprises among the one hundred largest by 1887, twelve by 1907, and nine by 1927, at which point they were found almost exclusively in the machinery and transport vehicles industries. By the late nineteenth century, "backward integration" (driven by technology as well as by defensive market strategy) already was quite common, particularly in heavy industry (coal, iron, and steel) and chemicals. What changed radically between 1887 and 1927 was the growing inclination of manufacturing enterprises toward "forward integration," initially (1887-1907) taking the form of membership in one of the rapidly multiplying syndicates, later (1907-1927) mainly by annexing or establishing a distribution organization owned by the firm. Accomplishing distribution by one or another of these means were: twenty-five of the hundred largest industrial and mining enterprises in 1887, eighty-two by 1907, and eighty-eight by 1927. In 1887, integrating distribution was normal, especially in the electrical, chemical, and brewing industries. More and more, it became the general strategy for all branches of industry. Often, as in heavy industry, independent merchants were the first to come under the edict of the syndicates, until (little by little) they completely lost their independence as big business bought them out or acquired majority shares. Before the First World War, then, German big industry revealed itself to be just as highly integrated as American big business, and to this extent it was also clearly distinct from the less-integrated British companies.¹⁰

Figure 1 Comparative Diversification among 80 of the Largest Industrial Enterprises in Germany (1907, 1927) and 82 of the Largest in the United States (1909, 1929)



3. One may also interpret the increasing diversification of big businesses as a gradual modification of the market principle by the principle of formal organization. By “diversification” we mean an entrepreneurial strategy whereby specialization in a product or product line is replaced by manufacture of a broader range of products – perhaps products based on the same or a similar technology, originating with the same or similar raw (or semifinished) materials, or sold through the same or similar marketing organizations. Tables 1-3 distinguish between four categories and degrees of diversification: Category A covers nondiversified enterprises active in only one of 430 product lines as in the listed statistics of the German Reich; Category B covers weakly diversified enterprises active in two to four product lines (for example, rolled steel fabrications and pipes and locomotives); Category C covers more highly diversified enterprises active in five to nine product lines; enterprises are counted as fully diversified, Category D, when they are active in ten or more product lines.¹¹

As Table 1 shows, the inclination of German businesses to diversify was already considerable in the 1880s, especially in iron and steel production, in machinery, and in the electrical industry. Still, in 1887 66 percent of the largest hundred enterprises were either not diversified yet or just barely so (in other words, they remained highly specialized); by 1907 this share fell to 49 percent, and by 1927 to 37 percent. If one compares these figures with similar data gathered about the largest American enterprises in 1909 and 1929, it becomes evident that the degree of diversification among German enterprises clearly surpasses the

degree of diversification among American businesses. Figure 1 describes this German-American contrast. In 1907/09, 48 percent of German industry front-runners were already situated in the two highest stages of diversification, in contrast with just 15 percent of their American counterparts. In 1927/29 Germany still held a lead, but it had narrowed: 36 percent of American enterprises now were highly diversified, compared to 53 percent of German businesses. If one compares by branch, then it emerges that the most highly diversified big businesses in both countries were in iron and steel production, the electrical industry, and chemicals, while Germany had much more in the way of large, highly diversified enterprises in the machinery, instrumentation, and transport vehicle industries. Corresponding figures for England are lacking, but everything points to a degree of diversification well behind America's.¹²

4. By 1887, only fifteen of the one hundred largest enterprises were constituted as partnerships; these were primarily in iron and steel production (among them Krupp and the Silesian "noble enterprises," such as von Giesche's Erben company, Breslau, and Henckel von Donnersmarck). In 1897 just seven partnerships remained among the hundred largest (namely, four Silesian "noble enterprises" and Stinnes in heavy industry, Borsig and Henschel in mechanical engineering), and in 1927 just one (the comparatively small Schlichau shipyard in Elbing). The majority were corporations. Tables 1-3 show the distribution of different legal forms among the hundred largest.

In Germany as in other countries, the joint-stock company, or *Aktiengesellschaft* (AG), was implemented politically and shaped legally during the second third of the nineteenth century. It had already (see Table 1) become the standard type for big businesses in the 1860s, 1870s, and 1880s, while the vast majority of medium-size and small businesses retained the partnership form.¹³ In 1887, 1907, and 1927, respectively, seventy-nine, seventy-seven, and eighty-eight of the one hundred largest were constituted as AGs. The other legal forms (the traditional mining law union, the limited-liability company, and the partnership in commendam or "scrip company") played relatively minor roles.

The frequency of the AG type among the hundred largest may largely be explained by their capital requirements. For example, in Ruhr mining by the 1850s/60s the capital requirements to found a company were so large that they could hardly have been met by individuals and families. Recourse to the capital market and to assistance from the banks was essential. Thus, from the outset many of the Ruhr pits were corporations that limited investors' risks, knew how to amass dispersed capital, offered banks opportunities for examination and intervention, and were led by "salaried entrepreneurs" (managers), while many co-owners (investors)

exercised hardly any influence on business decisions.¹⁴ In the railway sector (not covered here), things were much the same.¹⁵ In most other branches, by contrast, capital requirements began to outstrip the capacities of individual families and self-financing only at an advanced stage of expansion. More than half of the hundred largest businesses in 1907 originally had been founded as partnerships, and then were mostly restructured in the 1870s or 1880s as an AG or another stock company.

The driving forces appearing at this stage were mostly the banks, which (like the Deutsche Bank, Commerzbank, and Darmstädter Bank) were themselves constituted as joint-stock companies. They were engaged primarily in industrial financing but were prepared to lend capital-starved industrial enterprises a hand with long-term credits and an entree into the capital market only if these businesses transformed themselves into a joint-stock companies or something similar. For only the corporate form provided opportunities for the banks to examine records and intervene in the enterprises they were supporting financially, especially via the supervisory board (prescribed by law since 1870), to which the banks could send their representatives. Bank directors were the single largest group among the members of supervisory boards in German industrial joint-stock companies, and in 1913/14 they made up 20 per cent. The Deutsche Bank, for example, had representatives in 186 other companies. Leading bank directors individually held as many as forty-four supervisory board seats in 1914, and as many as one hundred in 1930.¹⁶ Figures like these do not indicate domination of bank finance over industrial capital, as numerous analyses have attempted to prove.¹⁷ But the figures do indicate how important the AG form was for the growing links between industrial and banking enterprises and how frequently relations between businesses did not consist entirely of competitive and market relationships. Market competition no doubt continued to play a central role, but now it was overlain by a web of non-market relationships (here meaning: multiple memberships in the managerial boards of the large enterprises, with the resulting potential for coordination). This overlay was an additional element in the kind of organized capitalism gradually taking shape in Germany, seemingly earlier and more markedly there than in western Europe and North America.

5. Not every AG was a manager-enterprise, if by manager-enterprise one means an enterprise in which decisions and authority are carried out by salaried managers rather than by owners. Very often, especially if an existing firm was restructured as a joint-stock company, the AG merely represented a legal form within which the founders or their family continued to hold the decisive vote and exercise control: a family business in AG clothing, like Krupp after 1903.

Similar to Alfred D. Chandler, Jr.,¹⁸ we may distinguish among three types of enterprise, whereby the actual control structure, and not the legal form, serves as the criterion: the *owner-enterprise*, dominant at an earlier time, in which the owner or owners make the long-range strategic decisions as well as day-to-day decisions about company performance; the *manager-enterprise*, in which salaried managers make both kinds of decisions, while the owners of (dispersed) capital barely participate; and an *intermediary form*, in which strategic decisions (above all, investment decisions) are made by the founders (or by their families, heirs, and close friends) but with ongoing control residing, at least for the most part, in the hands of salaried managers.

On the basis of this classification, one may say: While owner-enterprises accounted for a small minority among the one hundred largest businesses by 1887, a minority that would decline even further by 1927, the manager-enterprises were also a minority – albeit a growing one. The majority of the hundred largest were in the intermediary category in which no clear separation between ownership of capital and entrepreneurial control had yet emerged. In 1927 manager-enterprises represented the majority of the largest businesses only in mining (and here they had even in the nineteenth century), iron and steel production, chemicals, as well as generally among the really big industry leaders at the very top. Hannes Siegrist estimates that, among the ten front-runners – IG Farben, Vereinigte Stahlwerke (United Steelworks), Siemens, AEG, Mannesmann, Krupp, Burbach Kaliwerke, Winterschall (Kaliwerke), Harpenauer Bergbau AG, and Deutsche Erdöl AG – only two, Krupp and Siemens, were in the intermediary category; the remaining eight were manager-enterprises.

Expansion, integration, and diversification were possible for all three types of enterprise. However, as a rule the owner-enterprise ran up against inherent limits: overly intense expansion, integration, and diversification usually overtaxed the owners if they did not procure additional capital and (above all) specialized or general expertise “from outside,” that is (as a rule), if they did not take in bank representatives and professional managers into management and thereby transform themselves into the intermediary form, at least. In this form, however, they could compete with manager-enterprises for some time.

What the gradual replacement of the owner-entrepreneur by the salaried entrepreneur or manager really meant economically, socially, and politically was a topic much-discussed.¹⁹ Some feared it would lead to a withering away of dynamism and to irresponsible conduct, since these new managers would not have to vouch for their failures with their entire economic and social existence, just as (conversely) they would get only limited personal gain from eventual success. Conversely, others

linked the rise of the managers to the hope that directors would exhibit less self-seeking behavior, take social welfare responsibilities more seriously, and contribute to a blunting of class conflict. Empirical research here is so difficult because (among other reasons) there were so many variants of the intermediary and because the transition was so gradual. All in all, neither most fears nor most hopes were confirmed. At most, for the period under investigation, the following distinctions stand out between the director of a large manager-enterprise and the director of a large owner-enterprise:

- (a) Managers may have made decisions somewhat more dynamically and expansively than owner-entrepreneurs; the latter more than the former tended to fear losing the comparative influence (secured by a majority of capital) of their family or themselves due to rapid expansion via mergers and bank participation. In contrast, the power of the salaried entrepreneur did not rest on ownership of capital and traditional legitimation; rapid expansion could only improve this individual's position. To the salaried manager, in a certain sense, purely economic interests and motives were more penetrating than to the owner-entrepreneur, who could be curbed by extra-economic (for example, familial) considerations. The comparison between Werner Siemens and Emil Rathenau illustrates this point (see chapter 3 above). Accordingly, when it came to integration and diversification, manager-entrepreneurs were more likely to bank on mergers and the formation of conglomerates, owner-entrepreneurs more on internal expansion and cartels. It is interesting to observe that most steps toward diversification and integration taken by the one hundred largest businesses (at least between 1887 and 1907) did not happen via a union between already existing enterprises but through internal growth, internal differentiation, new branch openings, and so forth. Conversely, of 158 mergers observed among the hundred largest between 1887 and 1907, only twelve had an integrative impact and twenty-three a diversifying impact.²⁰
- (b) Managers were distinguished from owner-entrepreneurs by somewhat higher average schooling qualifications as well as by a higher state of general education and specialized vocational training. In the hiring criteria for managers, qualification took a higher place than property. However, this hardly meant democratization of access to the highest levels of the entrepreneurial economy. For, in the period under investigation there were no fewer barriers standing in the way of acquiring higher and tertiary education than there were impediments to acquiring capi-

- tal. Only the "new middle class," that is, salaried employees and civil servants (lower and mid-level), could draw advantage from the growing importance of the school system as a selection mechanism: their sons were better represented among the managers than among the owner-entrepreneurs.
- (c) In the careers and work situations of the salaried entrepreneurs, there were some elements typical of civil servants (*Beamte*) that were alien to the lives of owner-entrepreneurs: step-by-step careers starting from mid-range white collar positions all the way up to the executive suite; relatively late entry into entrepreneurial position; salaries influenced by seniority, among other criteria; fewer residential ties to any one place; emphasis upon professional expertise as the basis for claims to authority and prestige. This probably tended to increase a pronounced distance from the working class. It also promoted the process of systematization and bureaucratization inside the big businesses at levels of organization below the executive board. There was more formalization and greater reliance on putting things in writing; spheres of responsibility and position in the hierarchy were more clearly demarcated; the sequence of processes inside the enterprise became more precisely planned and controlled, increasingly on a scientific basis. This systematization and partial bureaucratization of the large enterprises' internal life had numerous impetuses, and these were not entirely missing from the big owner-enterprises either. However, these trends gained entry into the manager-enterprises earlier and more easily. Admittedly, decision-making processes and strategies at the highest levels remained thoroughly nonbureaucratic. By virtue of flexibility, preparedness for competition, level of income, profit-sharing, vulnerability (in principle) to firing, opportunities for upward mobility (even without formal qualifications and outside the seniority system) – by virtue of these and other factors, the salaried entrepreneur continued to be clearly distinguished from the public-sector civil servant. At the very top, bureaucratization of the big private-sector capitalist enterprises would have been deadly.

This chapter has yielded a picture showing how the formation of organized managerial capitalism's basic structures (insofar as they were treated here) emerged more clearly and earlier in Germany than in western Europe and, to some extent, even North America.²¹ An explanation for this phenomenon can only be hinted at here.²²

The formation of these structures was surely suggested and promoted by the emphasis on science that, for a variety of reasons, characterized

German industrialization – in gradual contrast to England and even the United States. The lack of entrepreneurial-managerial expertise appears to have been a limit on the formation of large, diversified, integrated conglomerates everywhere. But it can be argued that, owing to the earlier development of bureaucratic organizational models in the Prusso-German civil-service state (and on other grounds), the corresponding supply of skills and knowledge was larger in Germany than in England or the United States, even if bureaucratic models had to be modified before they were applicable to the private-sector economy. Altogether, in many respects, it was state-bureaucratic influences that facilitated the formation of large manager-enterprises. The critical protective tariff policy of the German Reich beginning in the late 1870s must also have promoted the buildup of large entrepreneurial units.

But, above all, one should take into account that Germany was one of the industrial successor states, a country shaped for a long time by conditions of relative backwardness, but which then industrialized relatively rapidly while attempting to make up for the lead enjoyed by Western models, especially England.²³ That meant: (1.) In light of what was initially a poorly developed commercial-manufacturing infrastructure, it seemed obvious that newly forming enterprises should not leave the procurement function and part of the distribution function to the market but should take these into their own hands, let their own organizations look after these functions, and extend them accordingly. Early organization was therefore the answer to the market's early weaknesses. This mechanism helps explain why there were more functionally integrated enterprises in Germany than in England as early as the first phase of industrialization, the "Industrial Revolution" proper (from the 1840s through 1873), especially in heavy industry and mechanical engineering. (2.) Relatively poorly developed and barely transparent markets compelled young businesses at an early stage toward product diversification if they wanted to use their advanced facilities (patterned on Western models) to capacity and in order to reduce risk. (3.) Joint-stock companies can be interpreted as means to facilitate industrialization under conditions of relative economic backwardness. Conversely, compared to partnerships, joint-stock companies offered less resistance to the rise of managers, to integration, and to diversification. The influence of banks worked in the same direction. Their strength was correlated with the relative weakness of the independent merchant, who in Germany appears to have played a far smaller role in the financing of industrial enterprises and in diverse arrangements among them than in, say, England.

There are other connections between the initial macroeconomic backwardness of a late though rapidly industrializing country and its largest enterprises' tendency toward bigness, diversification, integration,

and modernity. To be sure, this backwardness disappeared over the course of decades. Yet its results lingered on, in part, and eased the transition to organized managerial capitalism along a broad front in the last quarter of the nineteenth and in the twentieth century.

Notes

1. F. Naumann, "Neudeutsche Wirtschaftspolitik" (1906), in idem, *Werke*, ed. T. Schieder (Cologne/Opladen, 1966), vol. 3, p. 104 ff.
2. See, for introductory purposes, W. Schluchter, *Aspekte bürokratischer Herrschaft: Studien zur Interpretation der fortschreitenden Industriegesellschaft* (Munich, 1972).
3. Cf. E. Lederer, "Zum sozialpsychischen Habitus der Gegenwart," *Archiv für Sozialwissenschaft und Sozialpolitik* 46 (1918/19): 114-39.
4. For details on the following, see J. Kocka, "Organisierter Kapitalismus oder Staatsmonopolistischer Kapitalismus?" in *Organisierter Kapitalismus: Voraussetzungen und Anfänge*, ed. H.A. Winkler (Göttingen, 1974), pp. 19-35. For a critique of this concept, see, inter alia, D. Baudis and H. Nussbaum, *Wirtschaft und Staat in Deutschland vom Ende des 19. Jahrhunderts bis 1918/19*, (Berlin, 1978), pp. 46-50; K.J. Bade, "Organisierter Kapitalismus," in *Neue Politische Literatur* 20 (1975): 293-307; V. Hentschel, *Wirtschaft und Wirtschaftspolitik im wilhelminischen Deutschland: Organisierter Kapitalismus und Interventionsstaat?* (Stuttgart, 1978), pp. 9-21; J. Kocka, "Organisierter Kapitalismus im Kaiserreich?" *Historische Zeitschrift* 230 (1980): 613-31.
5. According to W.G. Hoffmann, *Das Wachstum der deutschen Wirtschaft seit der Mitte des 19. Jahrhunderts* (Berlin, 1965), p. 212.
6. The research was carried out within the framework of a project directed by J. Kocka and N. Horn at the Zentrum für Interdisziplinäre Forschung, 1976-78, and especially by Dr. Hannes Siegrist. For details, see J. Kocka and H. Siegrist, "Die hundert größten deutschen Industrieunternehmen im späten 19. und frühen 20. Jahrhundert," in *Recht und Entwicklung der Großunternehmen im 19. und frühen 20. Jahrhundert*, ed. N. Horn and J. Kocka (Göttingen, 1979), pp. 55-122; H. Siegrist, "Deutsche Großunternehmen vom späten 19. Jahrhundert bis zur Weimarer Republik," *Geschichte und Gesellschaft* 6 (1980): 60-102.
7. In terms of capital, IG Farben (with 1.1 billion marks) in 1927 surpassed Vereinigte Stahlwerke (with 800 million marks).
8. Cf. Kocka and Siegrist, "Die hundert größten," tables 4 and 5; P.G. Porter and H.C. Livesay, "Oligopolists in American Manufacturing and their Products 1909-1963," *Business History Review* 43 (1969): 285ff.; A.D. Chandler, Jr., *The Visible Hand: The Rise of Modern Business Enterprise in the United States* (Cambridge, MA, 1977), App. A; P.L. Payne, "The Emergence of the Large Scale Company in Great Britain 1870-1914," *Economic History Review* 20 (1967): 519-42.
9. In the German literature, the phenomenon is often discussed under the label "vertical concentration." Here we rely on the concepts and research questions of Chandler (*The Visible Hand*), to whose investigations this approach is very much indebted.
10. On Great Britain: Payne, "The Emergence"; and L. Hannah "Visible and Invisible Hands in Great Britain," *Managerial Hierarchies: Comparative Perspectives on the Rise*

of the Modern Industrial Enterprise, ed. A.D. Chandler, Jr., and H. Daems (Cambridge, MA, 1980), pp. 41-76. On the United States: Chandler, *Seedbed of Managerial Capitalism*, *ibid.*, pp. 9-40; *idem*, *The Visible Hand*. In the matter of functional integration, Chandler also assumes an American lead over a "Europe" that catches up much later. This does not apply to Germany.

11. For details on the methods and measuring techniques used in this investigation – on the 430 "product lines" from the business survey of 1925 – see Kocka and Siegrist, "Die hundert größten." It is significant that the American investigations used for comparative purposes (e.g., Porter and Livesay; Chandler) measure diversification employing a grid that is also conversant with approx. 430 product fields. This ensures comparability.
12. For comparison with the United States, see note 10. For comparison with England: H. Levy, *Industrial Germany: A Study of Its Monopoly Organisations and Their Control by the State*, 2nd ed. (New York, 1966); K. Weidenfeld, *Das Persönliche im modernen Unternehmertum* (Leipzig, 1911), p. 21ff.; L. Hannah, "Introduction," in *Management Strategy and Business Development*, ed. *idem* (London, 1976), p. 3ff; as well as Hannah, "Visible and Invisible Hands."
13. Cf. N. Horn and J. Kocka, "Development of Company Law and Economic Growth, Especially in Germany, 1800-1914," in *Proceedings of the Seventh International Economic History Congress*, ed. M. Flinn (Edinburgh, 1978), vol. 2, pp. 223-32; R. Passow, *Die Aktiengesellschaft: Eine wirtschaftliche Studie* (Jena, 1922), p. 30 (shares of employees in joint-stock companies, differentiated according to firm size).
14. Cf. H. Schacht, "Zur Finanzgeschichte des Ruhrkohlen-Bergbaus," *Schmollers Jahrbuch* 37, no. 3 (1913): 162ff.
15. Cf. R. Fremdling, *Eisenbahnen und deutsches Wirtschaftswachstum 1840-1879* (Dortmund, 1975).
16. Cf. F. Eulenberg, "Die Aufsichtsräte der deutschen Aktiengesellschaften," *Jahrbücher für Nationalökonomie und Statistik* 32 (1906): 92-109; W. Sombart, *Der moderne Kapitalismus*, vol. 3 (Munich, 1927), p. 740ff.; O. Jeidels, *Das Verhältnis der deutschen Großbanken zur Industrie* (Leipzig, 1905).
17. On this problem, see J. Kocka, "Entrepreneurs and Managers in German Industrialization," in *The Cambridge Economic History of Europe*, (Cambridge, England, 1978), vol. 7/I, pp. 565-70.
18. Cf. A.D. Chandler and H. Daems, "Introduction," *The Rise of Managerial Capitalism*, ed. H. Daems and H. van der Wee (Louvain, 1974), pp. 1-34, esp. p. 5ff.: the authors distinguish between personal, entrepreneurial, and managerial enterprises. Also see Chandler, *The Visible Hand*; and *idem*, *Scale and Scope: The Dynamics of Industrial Capitalism* (Cambridge, MA, 1990).
19. Cf. chapter 6 above.
20. Cf. C. Huerkamp, "Fusionen der 100 größten Unternehmen von 1907 zwischen 1887 und 1907," appendix to Kocka and Siegrist, *Die hundert größten*.
21. That Germany, at the time of the First World War, was head and shoulders over other countries in the degree of "organization of capitalism" was observed by V.I. Lenin right after the war ("Bericht über das Parteiprogramm," 8. Parteitag der KPR [B], March 13-23, 1919, in *Werke*, vol. 29 [Berlin, 1968], p. 155). To be sure, the separation of the ownership of capital from entrepreneurial control and the rise of the salaried entrepreneur seem to have been more advanced in the United States during the first third of the twentieth century than in Germany.
22. For a more comprehensive account, see Kocka and Siegrist, *Die hundert größten*, pp. 89-96.
23. Cf. chapter 4 above.

Chapter 8



New Energies in the Nineteenth Century

Toward a Social History of the Electricity Business

Translated from the German by Jeremiah Riemer

The maxim that democracy is the product of equal voting rights for all – and of electricity – is attributed to Victor Hugo. A little later, as is well known, Lenin wrote: “Communism is Soviet power plus the electrification of the whole country.” And Josef Schumpeter not only believed that the decisive impetus for the economic recovery starting in the mid-1890s emanated from electrification and the electricity industry; he added: “(Electricity) has, without a doubt, called forth new industries and commodities, new attitudes, new forms of social conduct and behavior. It has ... completely overthrown ties to industrial locations ... [And] it has ... changed the relative economic ranking of nations – or, more to the point, it is still changing them.”¹ Electricity – the core of a second Industrial Revolution that in the late nineteenth and early twentieth centuries turned central Europe upside down yet again, just as the first Industrial Revolution based on steam power and the railway had profoundly changed living conditions some decades earlier – notions like these were quite widespread in the three decades prior to the First World War and during the interwar period.

To what reality did this image of the epoch-making power of electricity refer?

Notes for this section begin on page 189.

It certainly was not the sheer size of the electricity sector. In 1875, the German electrical industry consisted of just eighty-eight plants with barely twelve hundred employees – just 0.2 percent of people employed in industry and handicrafts. Shortly before the First World War, the electrical industry and electricity business together employed about 160,000 persons in Germany, which amounted to between 1 percent and 1.5 percent of everyone employed in industry and handicrafts. This is rapid growth, to be sure, but on the whole a very small phenomenon when one takes into consideration that, in today's Federal Republic of Germany, these two branches' share of everyone employed in the industrial sector is about 10 percent.

Due to its extremely high productivity, the electrical industry and the electricity business, with just a bit more than 1 percent of the industrial sector's labor force in 1913, reached a monetary output of 1.25 billion marks, which represented more than 5 percent of total production in this sector. But the share of the old industries was significantly higher: mechanical engineering contributed 13 percent, and mining 9 percent. And even a glance at investments reveals the extreme minority status of the electrical sector. Through 1913, nearly 23 billion marks were invested in railway construction, a third of this between 1897 and 1913. By contrast, the value of capital equipment invested in the public electricity business through 1913 amounted only to 1.8 billion marks. Even if one added the very extensive equipment used to produce electricity for in-house service, one would come to just approximately 6 to 7 billion marks of capital equipment for 1913, which was 2 to 3 percent of the capital stock for all branches of the economy.² And when one considers that, even in highly developed Berlin, only 5 percent of all homes had connections to an electrical network in 1914, it quickly becomes apparent just how little electrification had entered daily life before the First World War; the Berlin figure climbed by leaps and bounds in the 1920s and stood at 76 percent by 1933.³

Nevertheless, the following observations relate especially to the period preceding the First World War, with a look ahead at the 1920s. And yet, to many contemporaries of the late nineteenth century and early twentieth, the electrification of everyday life was a sign of the times, the essence of modernity as it was then defined. Essentially, there were two underlying reasons for this:

First, in contrast to all previous energy carriers, electricity allowed for a radical spatial separation between production and consumption of energy. It fostered the *centralization* of energy *production* at economically favorable locations and the enlistment of previously unexploited energy sources, while simultaneously permitting a thorough *decentralization* of *applications* into any number of subroutines and (as a result)

into entirely new fields of activity and spheres of life. The thoroughly consistent combination of centralized production and decentralized consumption demanded *planning* to bridge spatial gaps and precise *coordination* of different time spans. That is, it required planning, organization, and control, the construction of networks, and the arrangement of new *systems* within what, until then, had been a type of industrialization largely structured by the market, decentralized, or even entirely uncontrolled.

Second, because electrification required so much arranging, so much system, so many networks (and because its decentralized deployment allowed it to penetrate almost all spheres of living and activity), the rise of electricity was not merely a business history phenomenon of the first order. It simultaneously was bound up with a fascinating multiplicity of changes in social and cultural history – with changes that electricity required as *preconditions*, and with changes that electricity induced or helped determine as a *consequence*.

To be sure, this systematic, all-influencing character of electricity emerged quite slowly. Part of the electrification process for private households, for example, was a phenomenon of the 1920s (lighting), but another part (appliances) made a breakthrough en masse in central Europe only during the 1950s. The electrification of office technology is a phenomenon of the last few decades. But contemporaries of the *fin de siècle* and of the start of the twentieth century anticipated this – imaginatively and, at the same time, realistically.

Before I inquire into some of the sociohistorical conditions and consequences of electricity's rise, mainly on the basis of German, Austrian, and some American examples, here is a brief introduction to the major technical and industrial developments in the period of primary concern.

A first phase in the history of the electrical industry and electricity business stretches from the 1840s to the end of the 1870s. To be sure, all of the decisive inventions had been made earlier, especially from 1820 to 1840. But only beginning in the 1840s was electric telegraphy implemented. There were some spin-offs, such as the manufacture of railway fuse equipment, measuring instruments (for example, hydrometers), and electrochemical apparatuses. But until the end of the 1870s the electrical sector, still quite small (and still scarcely factory-based), was busy mostly with producing, installing, and monitoring telegraphs and cables. Certainly it seemed self-evident to the larger firms, like Siemens & Halske, that the sensible policy was to cover the entire range of electrical applications – and to expand continuously. Its core business was a specific kind of know-how, increasingly scientific, and not so much in

any particular production facility or market area. Experiments with incandescent lighting were as much a part of this core as the development of generators and electric motors (that is, economical means to transform mechanical into electrical energy and vice versa).

The second phase I would like to date from about 1880 through the First World War. Certainly, during these decades the once dominating low-voltage industry was also expanding – in the telephone boom beginning in the late 1870s, in the ever-increasing diffusion and differentiation of electrical steering, signaling, and control equipment, finding application not least of all in arms production. But, above all, this phase was characterized by the rise of high-voltage technologies, beginning in 1880. The dynamo (much improved by Siemens) and the incandescent lamp (based especially on the inventions of Edison and Swan in the 1870s) made possible the lighting business, which spelled a breakthrough for high-voltage current. Starting in 1880, power plants were built, initially small electric utilities serving a few blocks and mostly using coal, like the first one Edison built on Pearl Street in New York. These power plants soon fed electricity not only to the kind of lighting equipment widely installed on streets, in factories, in public buildings, and (in exceptional cases) even for private customers. Soon they were also (and especially) supplying electric motors, which found their first major application in electric rails (streetcars, subways), then in elevators, later for running big industrial facilities, and (in the final years before the First World War) even among handicraft and various small businesses. Other applications were added, including production of aluminum by electrolysis that began in the 1880s and later production of carbide, nitrogen-fixing chemicals, and even steel. In 1891 Oscar v. Miller succeeded in transmitting power across long distances (as alternating current); this alone made it possible to achieve a definitive spatial separation between production and utilization of electricity. Beginning in 1895, long-distance power plants emerged, mostly outside cities. From 1910 onward, there emerged big integrated systems, in which steam and water power occasionally supplemented each other, and in which a more even capacity utilization and steadier supply could be achieved. The price of electric power sank.

In 1891, there were forty-five power plants in the Kaiserreich, with a combined capacity of 17,000 kilowatts. In 1913 the number of plants came to 3,167 and capacity to 2.3 million kilowatts. Thus, by 1913 there were seventy times as many plants as in 1890, and capacity had increased by a factor of 136. These figures do not include industrial facilities producing for their own consumption, whose capacity could have been three to four times higher. And for the electrical industry: in 1882 its employees numbered barely 2,000, almost all of them on the low-voltage side. By 1907 they numbered 140,000, 85 percent of whom

were in high-voltage current. Rapid expansion and fundamental restructuring, therefore, went hand in hand.

The First World War brought increased state intervention in the electrical industry and electricity business. State intervention was only partially rolled back after 1918. There arose mixed companies with joint participation by private enterprise and public authorities. The Austrian *Landesgesellschaften* could serve as an example. In the 1920s, electrification of households continued, as did electrification overall, due to the spread of inventions that had been available for some time but that now experienced broader diffusion: the vacuum cleaner, the electric iron, the hair dryer, the electric oven, the washing machine – mostly based on American models. The radio was new. Hollerith machines had been used in the United States since 1890 for census-taking; now they gradually were being put to use in offices. And step by step, electricity advanced into the agricultural sector. Otherwise, development proceeded along lines already formed before 1914.

But there were ruptures, too: in 1900 twice as many electric cars as gasoline cars were being produced in the United States. In 1905/06, Siemens-Schuckertwerke opened its own factory for electric cars in Berlin; but it lasted only a few years. In the competition for a better gasoline car, and in the face of sinking petroleum prices, the electric auto was too slow and, with its giant storage batteries, too heavy. Given these drawbacks, the advantages the electric car offered – no noise and no exhaust – could not bring about a breakthrough.

Looking back on the Kaiserreich, Walter Rathenau, Emil Rathenau's son and successor in the management of AEG, wrote that electrical technology was all about "how a large part of modern life was being reshaped, not by the consumer, but in a manner organized by the producer and by necessity (to a certain degree) systematically imposed."⁴ This kind of catchy formulation is a thesis one often finds in the literature: the impulse for the rise of the electricity business and electrical technology did not come from the demand side but from the supply side, from the inventor, the scientist, the promoters, the companies and their dynamic managers, the ones who first created the demand in order to produce for it.

At first glance, this thesis must be qualified. Of course there was demand to which electrical technology and the electricity business responded. Following preliminary work by the medical doctor Sömmering in 1809, the scientists Gauß and Weber invented the electromagnetic telegraph in 1833. But not until the railway (desperate for a means to convey information and establish control across long distances at lightning speed, hence the basis for a great commercial opportunity)

had arrived did people like Werner Siemens (adventurously on the lookout for the profitable venture of a lifetime) devote themselves to the "telegraph business." Moreover, there was demand from ever tighter international markets, from merchants, sea captains, and bankers, for rapid methods of communication. There was also the military need, made more acute by the revolution of 1848/49, for rapid transmission of messages and commands. Only under these conditions could an invention turn into an industry, albeit one that then went on to search for possible new applications, develop its own dynamic, and provide the impetus for new developments.

Things were quite similar for the lighting business in the 1880s and 1890s. The demand (by authorities in charge of public order) for lighting public spaces, especially streets and squares, was an old one; it became more urgent as social conflict grew. Relatively new was industry's demand for lighting factories, major construction sites, railway repair halls, and similar workplaces, where the rhythm of work had long since become decoupled from the natural shift of day to night, where there were growing demands for precision work, and where large crowds of people had to be monitored. And while Werner Siemens's use of a horrible December 1881 fire in a Viennese theater to bring electric lighting to the stage (and, in addition, to promote the establishment of teaching positions in electrical technology) demonstrates his talent for effectively stirring public demand favorable to his business, it also testifies to the existence of a need that was by no means merely fabricated: the death of nearly 400 in Vienna's Ringtheater proved that an obsolete gas lighting technology was not safe for such large public halls. Only under pressure from this kind of demand could Edison interest banks in using their money and large staff to organize an invention process, with a systematic division of labor, to develop a practical electric lamp and the other components needed to install an entire electric lighting system. Only in the face of this kind of demand were inventions transformed into an industry generating enormous revenues.

The comparatively early introduction of electrical household appliances in the United States also may be explained, above all, as a history of needs. In a country where scarcity of labor and democratic culture made it harder to keep servants, middle-class women must have been most interested in vacuum cleaners and electric irons. In other words, Rathenau's analysis exaggerated.

Still, it was basically correct. First, an inherent feature of the up-and-coming electricity business was that it should spread to places, countries, and parts of the globe that were still developing commercially, industrially, and politically, and where autonomous demand had not yet really arisen. During the 1890s, Siemens was building electric railways not

just in Berlin and Vienna but also (and at almost the same time) in Peking, where a "Chinese Electricity Society" was created before 1900 to light the diplomatic quarter and other sections of the city – using German capital and under German management. In cases like these, supply seems to have preceded demand by a long shot.⁵

Second, even within the leading industrial countries there was still a split that was difficult to overcome, a gap between, on one hand, such needs as there were for communication, lighting, and power and, on the other hand, the successful establishment of a modern electricity business. It really did require special effort to secure financing, organization, and acceptance for this business. To be specific, it was not just economic conditions that had to be created at the outset (that needed to be, in Rathenau's words, "organized by the producer and ... to a certain degree ... systematically imposed"). Among the conditions needing sponsorship were certain social, mental, and political requisites of electricity, as well. I will illustrate this with two examples: public relations and entrepreneurial structure.

Whoever aspired to build and profitably run electric power plants, lighting facilities, and electric railways in the 1880s had to market a technology that must have seemed very new and strange to potential consumers, even mysterious and sometimes anxiety-producing, and that threatened established interests. Especially at the outset, the future of the new energy carrier was unpredictable and full of risk. Electricity brought physical dangers, as everyone knew. Edison came out in favor of direct current (in the long run, unsuccessfully) with the argument that high-voltage, alternating three-phase current was too dangerous.⁶ In 1910, the number of deaths caused by electricity in Germany came to 138, of which the majority (62 percent) resulted from contact with high-voltage lines. In light of newspaper reports about the use of electricity to execute serious criminal offenders in the United States and about this method's tortuous imperfections, opinion turned against alternating current by around 1890. When, on the occasion of the Frankfurt Electric Technology Exhibition of 1891, the first overland line of more than 170 kilometers was completed, a Frankfurt newspaper featured a large cartoon portraying the nightmare of a visitor to the exhibition. There, with his contorted face flooded by spotlights, slept a man whose hands were caught up in the high-voltage Lauffen-Frankfurt power line. While Pandora danced on the man's chest, her box opened up. A bunch of little devils were gathering electrical appliances, which were portrayed as instruments of torture and operated by two ominous-looking overlord figures (pharaohs with hats) – by Siemens and Halske.

It is understandable that entrepreneurs like Edison and Insull in the United States and Emil Rathenau and Oscar von Miller in Germany had

to struggle against this mood of rejection and skepticism. The journal *Gartenlaube* reported on the same Frankfurt exhibition:⁷

The first application of the transmitted current consisted of hooking up hundreds of exhibition lamps to the power line. And just look at how they were beaming with the brightest luster, a shining symbol of progress that the human spirit has turned into the light of knowledge.

One of the prettiest ornaments at the Frankfurt exhibition is the waterfall. From atop an artificially constructed precipice crowned by a tower, a picturesque waterfall plunges down, playing all evening long, electrically lit from inside, sending its floods downward in a glowing display of magnificent colors. Previously, this kind of thing was set in motion by a powerful, steam-driven spinning pump, which would take the water required from the Main river and move it up about ten meters. Now, this work has also been unloaded onto electric current carried by remote transmission. Powerful dynamo machines have taken the place of the steam machine. The circulation that results is truly wonderful! At a distance of several days' journey [from Frankfurt], the Neckar river waterfall that is directed into Lauffen's turbines takes just a second to overcome the broad expanse, raise the Main water up high, and then force the very same water, as it were, to recapitulate and reproduce the Lauffen waterfall in Frankfurt. The instrument used, a power line, consists of some copper wires laying so peacefully on the telegraph poles as if to say that the entire story does not concern them in the least.

The exhibitions, which were hosted annually beginning in 1881, with their electricity palaces and shows, their stagings of illuminated castles, town halls, cafés, and theater, their versatile advertising using *Jugendstil* metaphors – electricity as sorceress, muse, goddess, even Madonna – all of this served to popularize the new technology, which ultimately needed to be accepted not just by a few representatives of officialdom (as in the case of the telegraph) but by a broad public.

It was impressive how receptive the public then was, how it believed in progress and was prepared for modernization, how little resistance electrification elicited, how few Luddites there were. Much of this could certainly be ascribed to the advantages of electricity, which hardly destroyed any jobs but instead created new ones, and which promised comfort and progress, and which was so wonderfully clean, noise-free, and odor-free wherever it was deployed; everything burdensome remained behind at the site of production. Electricity had a reputation as something healthy; since the end of the eighteenth century it had fascinated medical science. But the positive public attitude toward electricity was also linked to prevailing convictions and moods of the time, which invested far greater hopes in technical progress and were further removed from skepticism toward technology than was the case with the first industrial generation or people today. And public receptiveness

could also be attributed to successful public-relations work by the new entrepreneurs, who knew that their economic success depended, more than ever before, on whether they succeeded in influencing the public.

Not all businesses were suited to implement the new technologies. This can be demonstrated by comparing Siemens with AEG.⁸

At the beginning of the 1880s, when Europe became aware of Edison's patents, the Siemens firm enjoyed an unrivaled position in Germany and Europe. With over eight hundred employees in Berlin and twenty-one hundred in Europe, Siemens & Halske covered the whole known field of electrical technology at the time. The company experimented, of course, with electric lamps and other high-voltage appliances; after all, it was Siemens & Halske that developed the dynamo. But it was not Werner Siemens who helped the new high-voltage technology attain its victory in Germany but, rather, the newcomer and outsider Emil Rathenau. It was not Siemens & Halske that led the high-voltage movement in 1890 but instead the then recently founded (1881) German Edison company, soon to be called AEG.

This is not the place to repeat the story of the truly preventable rise of AEG, of its alliances and tensions with Siemens, the rival still towering high above AEG in 1881 but shaken off by 1890. What matters is this: The new high-voltage businesses, the installations, the central power plants, and the new operating companies required different business decisions and entrepreneurial attributes than Siemens was ready and able to introduce. Siemens the successful manufacturer was skeptical about the propaganda-imbued high-voltage startup business of Rathenau. He talked about this business as a "lighting uproar," a spook that would soon fade, and about the not entirely serious business practices of this "swindle company." Beyond that, Siemens wanted to remain master of his family business, and so he rejected the possibility of seeking financial aid, which he easily could have obtained from banks but without which the extremely capital-intensive business deals with power plants were not possible. The high-voltage revolution necessitated a new type of entrepreneur: the technically and scientifically trained, commercially aggressive entrepreneur, versed in publicity and politics, possessing organizational competence; someone who did not detest having to practice financial policy, who would cooperate with specialists on teamwork, and who could function in networks, roll up his sleeves, not be overly concerned about family tradition, and, finally, who had a well-developed sense of scale and systematization. Engineer and manager Emil Rathenau embodied these attributes superbly, while the elder Werner Siemens who continued to model himself on the traditional factory master and owner-entrepreneur, was not really up to the new demands. Only after 1890, under new man-

agement, did the Siemens enterprise adapt to the new requirements and adopt the procedures that Rathenau's AEG was already practicing.

The rise of the electricity business took place within the tightest of alliances among industrial big business, banks, and public authorities, within new organizational forms, under the leadership of academically trained managers, and with heavy participation by engineers and natural scientists. The success or failure of the electricity business in a particular country hinged substantially on whether, at the end of the nineteenth century, that country's traditions, apprenticeship training system, social structure, or societal values eased or complicated the emergence of this new type of entrepreneur. This, among other factors, would explain why the English electricity business lagged behind its German and American counterparts at the time.

A meticulous comparison of Germany, the United States, and England undertaken by Thomas P. Hughes in his splendid book *Networks of Power* reveals additional, non-economic factors shaping the electricity business. To summarize quite briefly: In *Chicago* the initiative lay with the big manager-enterprises (for example, Samuel Insull's firm), which constructed highly complex, wide-ranging systems connecting one precinct and city to another. This meant, of course, that they needed assistance from public officials and legislation, but that was something they obtained for themselves; under American condition, the economic clout and social influence of these business leaders was big enough, while the "civil servants" and politicians proved to be more or less dependent helpers.

In *Berlin* things were different. To be sure, here, too, the construction of central power plants, lighting systems, and railway utility companies took place under the direction of major private entrepreneurs of the Rathenau type – and in league with production companies like AEG, service providers like Bewag (the Berlin public utility company), and banks like the Berliner Handelsgesellschaft. The public authorities did not make the basic decisions. Unlike the Imperial Post Office, which had introduced telegraphs and telephones on its own initiative decades earlier, the municipal and state authorities at the end of the nineteenth century possessed neither the freedom – they had invested in gaslighting and horse-drawn trolleys – nor the farsightedness or propensity for risk-taking, and certainly not the money, to initiate or even direct the process of electrification. But the public authorities acted as important negotiating partners, from the outset helping determine tariffs, secure repurchasing and preemption rights for the state, trying to watch out for what the environment would tolerate, and helping to implement wide-ranging coordinating decisions. This bureaucracy was not parochial and did not really attempt to put the brakes on; and as soon as the period of

greatest risk (and greatest profits) had passed, it became increasingly interventionist, so that, from the First World War onward, providing electricity became more and more a semigovernmental-governmental task, as was also the case in Austria. As a result – where productivity, capacity utilization, types of machines, and technical priorities were concerned – the Berlin and Chicago systems were remarkably similar, at least by 1915.

Things were again different in *London*. There, too, there was no lack of large-scale plans for complex systems and no shortage of dynamic promoters like Charles Merz. But plans and promoters got caught up in the welter of established interests that had attained strong parliamentary footholds in the governing system there. The electrifiers of London did not have to deal with their comparatively less-well-developed bureaucracies as much as with representative government, which in effect (on this count) proved much more conservative than Chicago's almost unencumbered market or Berlin's Prussian bureaucracy. The London electricity system grew more slowly and, above all, in a more decentralized way, spread across city precincts and individual firms. Only over the long run did the three cities' systems become more similar and the London system follow suit. Over the medium term, as one may see, political-institutional, social, and cognitive factors could lead to conspicuous differences in economic-technical development. This was especially true in this case, the case of the electricity business, whose implementation could never be a pure market economy process. Electrifying cities was always the product of a technological-economic-political-social constellation. Influencing this constellation became a precondition for entrepreneurial success.⁹

So much for some of the sociohistorical conditions behind the rise of the electricity business. But what about its sociohistorical consequences, its effects on social relations, on life and people's daily routines? This topic has no boundaries, for among electricity's peculiarities is its ubiquitous usage in infinitely variable amounts and even the tiniest of units. I shall restrict myself to three aspects: (1) the public, (2) industrial production, and (3) the private sphere.

(1.) Electric lighting did not initially catch on among private households; instead, it was first implemented in public spaces. Street lighting had existed since the seventeenth century, in the form of candles, torches, oil lamps, and (beginning in the early nineteenth century) centrally fed gas lanterns. Since the 1850s, there had been experiments with electric lighting in the form of the extraordinarily bright, expensive, and hard-to-regulate arc lamp. In some American cities during the 1880s, gigantic lighting towers with electric arc lamps on top were built, as in

Detroit, where there were 125 towers at heights of fifty to 150 meters that glowed as they lit up the entire city from on high. But mostly – and without exception in Europe – electric street lighting remained spotty, was restricted to a few famous boulevards, squares, or objects, and operated using small local sources of power.

Gaslighting remained dominant towards the end of the century. It had proved sufficient to the task of allowing something like a public night life to emerge in Europe's major cities well before the age of electricity. As early as the start of the nineteenth century, a portion of life was shifting from day into night. This applied, at least, to the metropolitan centers and major cities, though hardly for the provinces, and not in the countryside. It applied to well-to-do gentlemen of leisure, less so to the hard-working population at large. The late-night habit of strolling up and down an illuminated boulevard before and after the theater caught on long before there was electric street lighting.

Still, until the introduction of electricity, illuminating the darkness remained something in flux, far from self-evident. As the authorities in charge of public order had long been pushing to light streets to improve security, lanterns became favorite targets of the masses in revolt. In the revolutions of 1830 and 1848/49, revolutionaries revealed a preference for destroying lanterns. That had a practical function for camouflage, hiding, and protection, though certainly symbolic value as well – “lantern aggression” as an attack on the symbols of order, against light as an instrument of control. This, at least, was Wolfgang Schivelbusch's interpretation in his *Lichtblicke*.¹⁰

This symbolic struggle was no longer reported during the revolution of 1918/19. Because street lighting had become electrified since the 1880s, gradually supplementing and then driving out gaslighting, light was more equally distributed across the cities, there were many more lamps, and lighting became cheaper, more regular, and (in a certain sense) more self-evident. Even on the brightest moonlit nights, artificial lighting was no longer shut off, as had been the case with gas lanterns earlier. The symbolic value of light waned with its spread. The more self-evident it became, however, the greater the dependence on a regular power supply, as demonstrated by collapses like the New York blackout of 1977. Moreover, early on there were expressions of ambivalence about any full-fledged illumination of spaces. Regarding gaslight-illuminated factory halls, Jules Michelet wrote in 1845: “These newly built giant halls flooded by gleaming light torment the eye accustomed to darker dwellings. Here there is no darkness into which thought may retreat, no shadowy corner in which imagination may longingly loose itself in dreams. Under this illumination, no illusion is possible. Incessantly and mercilessly, it summons us to reality.”

That the controlling power of the police, the military, and the prison administrations increased with each step forward in lighting technology – that the gain of light can also mean a loss of refuge – this is something repeatedly observed by critics of civilization ever since.

This ambivalence of progress becomes even more pronounced where other applications of electricity are concerned. It was, of course, possible for politicians like Napoleon I, Napoleon III, or Bismarck to create plebiscitary power bases in the pre-electric era, too, though only (as a rule) after they had already proven themselves by some major success, usually on the battlefield. But Hitler was famous *before* 1939; what would have become of him without the microphone and loudspeaker? He would not, in any event, have become the drum major, the fanatizing speaker at Nazi Party conventions, the seducer at mass rallies, the way he has become familiar to us. And (to pick an entirely different example) what would Reagan have become without television? Would the Vietnam War have turned out differently had television not transmitted reports with live images into Americans' homes every evening? As early as 1916, incidentally, the historian and engineer Conrad Matschoß wrote: "Today the telegraph is turning the major events of the World War into a simultaneous experience for all of humanity."¹¹ Via cable and microphone, radio and television, electricity has helped change the very substance of politics, to heighten possibilities for manipulation as much as to increase opportunities for the many to get information and a share in self-determination.

(2.) In industrial production, the introduction of electricity aided mechanization's rapid progress, initially within large enterprises that quite frequently produced the electricity they needed in their own power plants. The deployment of electric motors facilitated mechanization of partial processes that once (under steam power) were non-mechanized, especially in the newly emerging assembly line. In the giant enterprise, electricity opened up new opportunities for decentralization and individualization, while loosening the dependence of individual machines, instruments, and working procedures on a central power source, allowing for a subdivision of energy, and increasing mobility in the work hall – as with cranes and lifting devices. Electrification went hand in hand with the disappearance of those dangerous (sometimes rigid, sometimes flexible) driving and transmission devices crisscrossing the room – all those straps, poles, and conspicuous gears, which had always represented a special accident risk and, at first glance, signaled the machine-dependency of workers in the factory halls of the nineteenth century. From now on, these transmission lines disappeared into wires and pipes, often laid underground. Production became quieter and cleaner, the division of space more flexible.

In Vienna, the number of electric motors supplied with current from central power plants in commercial use rose from 1,366 in 1902 to 19,076 in 1913, in other words about fourteen-fold. A major portion of this growth must have taken place among small businesses, since most large firms fed their electric motors from in-house power plants. During the same period in the predominantly small-business Viennese clothing industry – organized in the “sweating system” according to the putting-out method of home work – the number of electric motors rose from 184 to 3,608, or twenty-fold.¹² Elsewhere developments proceeded more slowly, though in essence similarly, and continuing along the same path after the First World War. Electricity plants promoted purchases by granting special rates to customers using energy in small amounts (at least through the First World War), if for no other reason than to balance out the uneven distribution of demand across day and night. With the expansion of the public electricity supply, the electric motor became *the* power machine of the little man and little woman in handicraft and housework. Electricity facilitated decentralized and individualized use to an extent simply unthinkable for water power and steam – once centralized production and affiliated networks had been put in place. Without a doubt, electricity contributed decisively to the survival of handicrafts, even if it proved unable to prevent their growing dependence on manufacturing industry and the wholesale trade.

(3.) Far more than any other energy carrier, electricity has changed the everyday private life of families and households, albeit only very gradually. At first, beginning in the late 1870s, the telephone was the special instrument used by public officials, the military, other institutions, and business people; like the electric light and the first electrical household devices, it initially was regarded as a luxury, perhaps even an obsession or expensive toy. Only in the interwar period did it make its way into the houses of the upper and middle strata of Central Europe, and only in the 1950s did it become common. But, in principle, the following could already be said about the nineteenth century: “(The telephone) compresses the space for communication, especially (at first) the space between short distances, that intra-urban space by and large left untouched by the telegraph. And, above all, it opened up the haven of the private home. From now on, anyone who could avail himself of a telephone could barge in here, and ... now a fire-break was cleared allowing additional technologies to break into the private sphere.”¹³

Whereas the gaslight (seen as poisonous, much too technical, and air-polluting) barely penetrated the private interior of homes, and while it did not succeed in ousting the petroleum lamp (typically used for lighting residential spaces since the 1860s), the electric incandescent light (so easy to switch on and off, and becoming ever more affordable) was wel-

came into the few homes that had electric power as early as the last years before 1914. After the war it joined a quick triumphal procession, initially marching through the cities, later parading through the countryside. Compared to petroleum and gas, it seemed cold and lifeless; but it was easy to measure out and required very little maintenance, and there were lampshades to create atmosphere, after all.

The small electric motor "meant for the mechanization of the household what the invention of the wheel meant for transporting cargo. It got things rolling." Thus wrote Sigfried Giedion in 1948 on the basis of American experience.¹⁴ He described how American catalog companies reduced the price of electric washing machines from \$150 in 1925 to \$60 in 1935 and how annual demand rose in the same period from 900,000 to 1.4 million units. There were similar trends for electric irons, vacuum cleaners, and refrigerators. "It is the age of the democratization of comfort."

Thorough electrification and basic democratization were often seen to be closely related allies. August Bebel, for example, then chairman and grand old man of German Social Democracy, developed, around 1900, the utopian (and a bit frightening) vision of democratized domestic life, in which electrification would be a central condition for liberating women from the strenuous grind of household work and for reducing the inequality between sexes and classes.¹⁵ Advertising prospects from the 1920s feature fashionably clothed, independent, confident-looking young ladies with a vacuum cleaner nonchalantly in one hand and a cigarette in the other – the very ideal of the emancipated *new woman* in sovereign companionship with progressive technology.

Still, in the first decades the electrification of households seems to have increased rather than decreased social inequality. Only 31 percent of all Berlin households owned an electric iron in 1928, 15 percent a vacuum cleaner, and 5 percent a hair dryer. Even smaller was the share of households with electric refrigerators, warm water storage, or washing machines – all of them under a half percent. In the affluent Berlin precinct of Zehlendorf, 63 percent of households owned an electric iron and 42 percent a vacuum cleaner; in proletarian Wedding, by contrast, the shares were only 19 percent and 6 percent, respectively. The private use of electricity was a result and a symbol of social superiority. Progress came in an un-balanced way.¹⁶

Werner Sombart's much read history of the German economy in the nineteenth century touched upon electricity just in passing. It was his view that "electricity and its impact no longer belong to the nineteenth but to the twentieth century."¹⁷ With respect to the equalizing impact of household electrification, he was certainly right. It was usually not before the second third of the twentieth century, when electrification of the

household approached common status, that electricity contributed more to making comfort egalitarian than toward making it unequally distributed. But in the course of time, it did not only help middle-class women to cope more easily with the widespread loss of keeping maids (beginning, in Germany, during the First World War and the 1920s). It also made life easier for lower-middle-class and proletarian women. It reduced the burden of family and household work, which had to meet raising standards as to the intensity of care, the quality of services, and the aesthetics of life. Together with demographic changes and other factors, electricity made it easier for women to take part in economic activities outside the home and in public life – conditions and consequences of the deep revolution of gender relations in the twentieth century.

Electricity is basically a carrier, rather than a source, of energy. It made possible, for the first time in human history, a radical separation – with respect to space, time, and perception – between production and consumption of energy. The products of limited natural resources and of hard or dangerous work in the mines, in the oil fields, or in the nuclear power plant are utilized in completely different surroundings and at other points in time. This essay has discussed some conditions and consequences of this. There is, most importantly, a basic cultural implication. Electricity facilitated differentiation between the spheres of production and consumption, between labor and comfort, between the world of work and the private space. Electricity made it possible to enjoy results without being constantly reminded of the costs. In that aspect, it helped to stabilize one of the problematic assumptions on which late-industrial and post-industrial cultures is built.

Notes

This essay was presented as a lecture to the conference "Licht und Schatten," which was organized by the Museum Industrielle Arbeitswelt in Steyr, Austria, June 1989. In addition to the citations in the notes, it uses information from the following studies:

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Chapter 9



Middle Class and Authoritarian State

Toward a History of the German “Bürgertum” in the Nineteenth Century

Translated from the German by Jeremiah Riemer

Defining the “Bürgertum”

When speaking of nineteenth century Germany, most German-language historians are likely to agree on which occupational and social groups should be counted as part of the *Bürgertum* (conveniently translated as “middle class” and sometimes as “bourgeoisie”) and which should not – apart from a few (albeit sizeable) intermediary and marginal groups whose classification is unclear and subject to change. Not counted among the *Bürgertum* are the nobility, peasants, workers, and the lower strata altogether. Always counted among the *Bürgertum* are merchants, manufacturers and bankers, owners of capital, and entrepreneurs and their top management – in other words, the *Wirtschaftsbürgertum*, the economic middle class, some would say: the bourgeoisie in the true sense of the word. We also include among the *Bürgertum*, as a rule, physicians, lawyers, and other independent professionals, secondary-school teachers and professors, judges and higher civil servants, as well as natural scientists, engineering graduates, and others sorts of

Notes for this section begin on page 204.

qualified experts – in other words, persons who have higher education (tending toward the academic side), who live off this education, and who may therefore sometimes be summed up collectively as “*Bildungsbürger*” (educated middle-class). “*Wirtschaftsbürgertum*” and “*Bildungsbürgertum*” are the two most important segments of the *Bürgertum*. Together with their families, they can hardly have made up more than 5-8 percent of the population during the second half of the nineteenth century.¹

It is less clear whether the large mass of self-employed small businesspeople in trade and industry – the artisans, retail merchants, innkeepers, and small proprietors – and what soon became a growing number of middle- and lower-ranking white-collar employees and civil servants can unambiguously be included among the *Bürgertum*. Toward the end of the nineteenth century, at any rate, they were readily designated as “*petite bourgeoisie*” (“lower middle class”), which signaled that they were in some sense part of the *Bürgertum*, though not in the full meaning of the word. As indicated, this is the late-nineteenth-century perspective. A century earlier, by contrast, urban artisans and shopkeepers unreservedly belonged to the estate of burghers. But to the extent that the propertied and educated bourgeoisie rose in the course of the nineteenth century to shape the concept of the *Bürger* (here in the sense of belonging to the middle class or bourgeoisie) – to this extent, those pettier livelihoods moved to the fringes of the conceptual field defining “*Bürgertum*.” As a mass phenomenon, white-collar employees are in any case a product of the late nineteenth century – employed just like the workers, though determined not to be counted as workers, but rather as a “new middle class” on the side of the *Bürgertum* – in self-image, reputation, attitudes, and lifestyle.²

Even if one sets aside the self-employed small businesspeople and petty salaried employees, together with some other categories that are hard to place (for example, Catholic clergy and artists), and concentrates merely on the economic and educational bourgeois core, it is not easy to say – though it is a central question for research on the *Bürgertum* – just what the common denominator is that contemporary dictionaries (not to mention historians today) count as a defining peculiarity of the *Bürgertum*. What is it, after all, that merchants, manufacturers, hired bank directors, self-employed lawyers, judges, and higher civil servants, and later the graduates with engineering and business management degrees, have in common from a social point of view and that simultaneously distinguishes them from the nonbourgeois? It cannot have been an identical class situation, for some were self-employed, others tenured civil servants, and still others ranked among white-collar employees in the private sector. They were distinguished from each other not only by profession but by education as well, for in the nineteenth century a majority

(though declining proportion) of the businesspeople did not have the academic education at its disposal that defined the *Bildungsbürgertum* as such. And the *Bürgertum* was extremely heterogeneous in terms of income and social origins as well. So how did it define itself, and what held it together?

One answer is: nothing, at least nothing essential. And indeed there are a number of social historians, mostly from western and eastern Europe, who do not care to mention *Bürgertum* at all or make it the subject of their research. Polish historians, for example, pursue research about the entrepreneurs, capitalists, and other businesspeople along with research on the “intelligentsia” and the petite bourgeoisie. These three research interests are pursued by different groups of people, are rarely combined, and end up heading in different directions. In the Anglo-American world we are acquainted with the concept of the “middle classes,” to be sure, but it is a rather marginal concept that does not greatly shape research. *Businesspeople*, on the one hand, and *professions*, on the other, tend to be studied separately.³ In the German-speaking world, too, most studies are specialized, one set dealing with entrepreneurs, a second with civil servants, a third with physicians; there are more studies about specific aspects of *Bürgertum* history (education, professionalization, the family ideal, liberalism) than there are about the *Bürgertum* as a whole. But, especially in recent years, there has been a tendency for research projects, monographs, articles, and anthologies to take the overall history of *Bürgertum* as their theme. Similar tendencies are showing up in Hungary and Italy.⁴ These works implicitly or explicitly support combining these occupational and social groups into the category of *Bürgertum*. With what kinds of arguments?

Two kinds of arguments strike me as sound, useful, and complementary. I shall concentrate on these and leave the others aside.

First, there are arguments about social frontlines. We know groups often are constituted only by conflict: authentic identity is constituted by setting oneself off from others. We know this from the history of classes, nationalities, and religious denominations. Applied to this case: In the late eighteenth and early nineteenth centuries, when the *Bürgertum* in the modern sense arose, merchants, manufacturing entrepreneurs and capitalists, educated civil servants and journalists, professors and some pastors – however different their other interests and experiences – all set themselves off from the old authorities, the privileged hereditary nobility, and absolute monarchy. Instead, they drew upon achievement and education, work and personality, and fashioned the model of a modern, secularized civil society, beyond feudal rank, which was not reined in from above and which was largely self-regulating – the very essence of a “bourgeois” or “civil” society. And all this sprang from

a critique of rank and privilege by birth and of the absolutist state. They met and conversed in reading societies and lodges, then in other associations, and soon in liberal assemblies, at political banquets, and finally in the regional parliaments. The citizens' critique was not, in the main, revolutionary. And the boundary lines were never sharply drawn – there were noble defectors aplenty, and enlightened civil servants adhered as much to the bourgeois critique as they did to the criticized state. The middle class did not just distance itself from the nobility but also imitated part of its lifestyle. For all that, what more or less united these Bürger from very different backgrounds was a set of common opponents: the nobility, unrestricted absolutism, and possibly also clerical orthodoxy. In opposition to these "enemies" there developed something like an overarching Bürgertum, encompassing different professions and groups, with its then utopian idea of a civil society made up of the free and formally equal.⁵

In the course of the nineteenth century, however, this frontline faded, without disappearing entirely. The extensive dismantling of the nobility's legal privileges from the beginning of the century until the First World War, the placement of the ruling system on a constitutional footing, and the socioeconomic and cultural rapprochement between the upper strata of the Bürgertum and parts of the nobility all contributed. But another frontline, not entirely absent even as early as 1800, now came to the fore: demarcation from below, the dismissal of the nonbourgeois lower strata and their movements, which became an ever more powerful challenge as the labor movement rose with industrialization. As many distinctions as existed among major industrialists, other businesspeople, academics in the liberal professions, senior civil servants, mid-level white-collar employees, school principals, engineers, and hotel proprietors – the critical, defensive self-segregation from the little guy, the people, the proletariat, and the workers' movement was something that they shared, as a rule. In a Kaiserreich society divided by class, and even in Weimar Germany, this was important and formative enough to allow us to continue speaking of a "Bürgertum."⁶

From this train of thought, the converse follows: To the extent that these frontlines were missing or faded, talk of a Bürgertum that is at once comprehensive and delimited loses its substance in reality. This explains international differences: where the tradition of nobility was weak or absent (as in Switzerland and the United States), where a country's early de-feudalization and commercialization of agriculture gradually wore down the noble-bourgeois distinction and even urban-rural differences (as in England and Sweden), we find powerful factors counteracting the formation of a distinctive Bürgertum and discourse on Bürgertum. The more radical leveling of the noble-bourgeois distinction in revolutionary

France, compared to the regions east of the Rhine, may have contributed to the more frequent mention of noble-bourgeois (compounded) elites (for example, notables) west of the Rhine in the course of the nineteenth century, as opposed to differentiating between nobility and *Bürgertum* (a persistently meaningful distinction in Germany, Austria, Italy, and parts of east-central Europe).⁷ For similar reasons, it is much harder today than in the nineteenth century and first third of the twentieth century to identify an overarching and simultaneously delimited *Bürgertum* in advanced industrial societies like the Federal Republic of Germany, for in the meantime the second of the frontlines mentioned above (the “class line”) has also faded, i.e. lost some importance, if not entirely disappeared. What is needed, then, is a consistent historicization of the concept *Bürgertum*.⁸ The *Bürgertum* construct is thoroughly dependent on its social and cultural context. It comes and goes with changing configurations. Not just the type of *Bürgertum*, but also its degree of existence, varies in time and place.

A second, compatible and supplementary line of argument refers to a specific “culture” shared by the *Bürgertum* – “culture” understood as a way of life, a distinctive set of interpretive patterns, symbols, values, and mentalities.

From this cultural-history perspective, the economic bourgeoisie and the educational bourgeoisie shared a special esteem for individual achievement and thereby justified their claims for economic remuneration, social standing, and political influence. Bound up with this was a positive attitude toward regular work, a characteristic inclination toward a rational and methodical way of life. From this perspective, what counted as singularly bourgeois was striving to manage individual and common tasks independently. This autonomous striving sometimes took shape in clubs and associations, cooperatives and self-government (rather than by dint of higher authority). The emphasis on education (instead of religion) characterized the world-image and self-image of the *Bürger*. Education was simultaneously a foundation for their dealings with each other and a line of demarcation from others (signaled, for instance, by quoting from the classics and displaying conversational ability). An aesthetic relationship to high culture (art, literature, music) was as much a mark of the *Bürgertum* as was respect for science. A central characteristic in the bourgeois way of life was most certainly a special family ideal: the family as a self-justifying community and an end in itself, a sphere shaped by emotional ties rather than by utility and competition, set off from economics and politics, strictly differentiated by sex and ultimately dominated by the paterfamilies, the family as a legally protected interior zone of privacy – in contrast to the public. Bourgeois culture was realized only in the city. Perhaps a minimum of liberal

virtues like tolerance, preparedness for conflict and compromise, skepticism toward authority, and love of liberty belonged to bourgeois culture; yet is precisely at this point that ideal-typical description easily passes over into ideological justification. If these norms, attitudes, and ways of life are what one uses to define how Bürger cohere and how they are distinguished from others, one can then come to appreciate how very important symbolic forms were for the identity of the Bürgertum: table manners and conventions, titles and fine lifestyle, cleanliness and personal hygiene, clothes, and the wearing of hats (no longer in fashion).⁹

The concept of *Bürgerlichkeit* has been suggested for this ensemble of cultural values and practices characterizing the Bürgertum's way of life. When we speak of *Bürgerlichkeit* in the remarks that follow, it is with this meaning in mind.

Defining Bürgertum as a specific culture and way of life has its problems. The distinguishing features are not always selective, for nothing in history is more difficult to grasp precisely than the airy domain of interpretations and customs, of value orientations and ways of life. Moreover, some of these distinguishing features apply to different groups of Bürgertum only after a fashion. And, conversely, they are not completely absent among the nonbourgeois strata.

But this cultural-history definition of Bürgertum does have numerous advantages and suggestive possibilities. For example, one may ask what kinds of socioeconomic and political conditions must be present for this definition of *Bürgerlichkeit* to be realized: such as the rule of law, a durable livelihood (regardless of the sources) well above the bare minimum for survival, and (linked to this) a degree of security and predictability in life; in families, a certain release of mother and child from previously oppressive employment, for only in this fashion could the cultivation and intergenerational transmission of bourgeois culture be guaranteed; probably, too, a certain remoteness from having to work with one's hands, and, above all, time and leisure.¹⁰ This, then, would also explain why petty artisans and lower-ranking white-collar employees belonged only on the margins of Bürgertum, while others – workers and peasants – did not belong there at all. For in these latter categories, the strict criteria for *Bürgerlichkeit* were met either to a limited, precarious extent or not at all. *Bürgerlichkeit* remained off limits to them, and their embourgeoisement – no matter how much it was pushed by bourgeois reformers and sought by the would-be-bourgeois – encountered obstacles.¹¹

Finally, one may make an analytical distinction between the concepts “Bürgertum” and “*Bürgerlichkeit*.” As much as both Bürgertum and *Bürgerlichkeit* were associated in their formative phase during the late eighteenth century and early nineteenth, clearly there were later phases

or other situations in which *Bürgerlichkeit* asserted itself, spread, and held its own without being dependent on or limited to the *Bürgertum* as a group. For central to bourgeois culture was a tendency toward generalization; it was a highly magnetic culture radiating a powerful aura. One need only consider the model of the bourgeois family, which the working class soon also sought to imitate. There was also a most diverse set of institutions and strategies serving to disseminate the bourgeois way of life and values, its forms of social intercourse and education, if need be with the assistance of power and pressure. One need only think about the institutions of the school and (in another way) the centralized enterprise, especially the factory. The rise in living standards and the general spread of primary education certainly advanced the embourgeoisement of nonbourgeois strata. Individual elements of *Bürgerlichkeit* – literacy, cleanliness, and later travel – spread to the point of becoming nearly universal in some societies. The more bourgeois major segments of society became, in general, the less *Bürgertum* and *Bürgerlichkeit* remained congruent. This is the situation in many Western countries today.¹² Conversely, one may ask how bourgeois a specific *Bürgertum* was, and how matters stood with the *Bürgerlichkeit* of that particular *Bürgertum*. This will now be illustrated with reference to the nineteenth-century German *Bürgertum*.

German Specifics

There is a long tradition of discussion about the question of what might really make the German *Bürgertum* so special when international comparisons are made and serious regional variations overlooked. One thesis frequently advanced holds that a German *Sonderweg* during the nineteenth century differentiated Germany from western Europe, an exceptionalism expressed above all in the peculiar weakness of the German *Bürgertum*, in a certain lack of *Bürgerlichkeit*, which weakened the survival power of the first German democracy in the interwar period and indirectly encouraged the rise and triumph of National Socialism. This *Sonderweg* thesis has been subject to intensive criticism in recent years.¹³

This discussion cannot be taken up here. It is mentioned only in order to indicate a background that lends particular interest to the peculiarities of *Bürgertum* and *Bürgerlichkeit* in Germany. The question of the “*Sonderweg*,” along with other questions, has guided the research project at Bielefeld’s Center for Interdisciplinary Research on the topic “*Bürgertum, Bürgerlichkeit, and Bourgeois Society – The Nineteenth Century in European Comparison*” (1986/87). The results of this project confirm that one cannot speak of any general underdevelopment of

German *Bürgerlichkeit* in the nineteenth century and early twentieth. They do not question two features of the so-called "aristocratization" of the *grande bourgeoisie*: the assumption of an aristocratic way of life and values among the upper reaches of the *Bürgertum*; and the social merger of the *grande bourgeoisie* and portions of the nobility. But they make clear that this (limited) bourgeois-aristocratic amalgamation represented a generally European, rather than a peculiarly German, phenomenon, which was, indeed, less pronounced in Germany than in, for example, England. Still, it had a special quality in Prussia-Germany. There the aristocratic-bourgeois amalgamation did not so much mirror bourgeois power and independence as it reflected the continuing dominance of traditional elites.

The results of the Bielefeld research project likewise have confirmed the extent to which the outcome of the comparison depends on the selection of the comparative framework. If we compare the German economic bourgeoisie with its counterpart in Western countries, it appears fairly weak, a late developer, and a bit backward, though with major regional variations. If, instead, the comparison is with Poland and Russia, it appears highly developed, by no means backward, and more on the strong side.

And there are peculiarities that cannot be interpreted either as strengths or as weaknesses but simply as peculiarities of the German *Bürgertum* and German *Bürgerlichkeit*. What comes to mind are features such as the structure of religious denominations or how the *Bildungsbürgertum* developed and radiated an aura in ways seemingly almost unique by international comparison.¹⁴

But we cannot go into all of this here and now. Instead, I would just like to speak about a central context, a central emblem of the German *Bürgertum*, that comparative research repeatedly confirms as distinguishing this stratum from the bourgeoisie of other countries. I have in mind the strong orientation toward the state, or (if you will) the state-encumberedness of the German *Bürgertum*.

In international comparisons with England, the United States, east-central Europe, and the south, one basic state of affairs repeatedly appears as something that can hardly be underestimated: For Prussia, Austria, and other major German states, and then later for Imperial Germany, the construction of efficient, influential, well-respected public bureaucracies happened early on – long before industrialization, before parliamentarization, and especially before democratization. The civil-service state in Germany is a product of the eighteenth century; and despite all the expansion and change it has experienced, it fundamentally survived the profound ruptures of German society all the way through to the twentieth century. Certain decisive feats of moderniza-

tion in Germany were steered by the state – from the enlightened absolutism of Joseph and Friedrich, through defensive modernization via the reforms of the early nineteenth century, to the foundation of the Reich and the Reich's parliamentarization by decree in 1918. In England and the United States, public bureaucracies came about much later and were less influential; in Europe to the south, north, and east, a very different situation prevailed, in which rule was exercised for a long time by foreign powers and their civil servants. In France, to be sure, bureaucracy also grew out of absolutism, but it was much less an agent of modernization, less independent, certainly not as well respected, and less formative.

The influence of bureaucratic elites and models, of bureaucratic power and bureaucratic culture can be demonstrated – in comparative perspective – in many areas of German social, constitutional, economic, and cultural history. Certain peculiarities of our massive, though rather nonrevolutionary, labor movement can be deciphered from this perspective, as can the restrained parliamentarization of the Kaiserreich or even the fact that the most influential analyses of bureaucracy stem from German authors – Max Weber, Otto Hintze. It is not surprising to learn that the history of *Bürgertum* and *Bürgerlichkeit* in Germany was also shaped by these connections. This is not the place to demonstrate this exhaustively.¹⁵ I shall restrict myself to illustrating the point on the basis of four individual phenomena.

(1). To begin with, there is the matter of the elevated reputation and strong sociopolitical influence enjoyed by civil servants among the German *Bürgertum*. To be sure, we must differentiate according to region and decade. There were also regions and cities in Germany where merchants and entrepreneurs were dominant, as in the Saxon manufacturing region around Chemnitz, in the commercially crowded Bergisches Land, in cities like Hamburg and Krefeld, and more so in the southwest and west than in mid-Prussia. And, no doubt, with industrialization the economic bourgeoisie experienced a rapid ascendancy, also relative to civil servants and other "*Bildungsbürger*." Wilhelmine Berlin had a strong, wealthy, prestigious, and self-confident bourgeoisie, which by no means looked up respectfully to civil servants – far different from the Berlin of the Vormärz (prior to 1848). But in spite of this, comparison with Western Europe and the United States shows that the *Bildungsbürgertum* in Germany was far more important than the bourgeoisie. And within the *Bildungsbürgertum*, the civil service element was dominant, in sharp contrast to the Anglo-Saxon world, but also in contrast to Italy, with its many influential lawyers, or to the Polish "intelligentsia" (which generally did not enjoy civil-servant status). The unique position of civil servants within the German *Bürgertum* is demonstrated by their relatively

large numbers and elevated social reputation as well as by their pronounced political power, relative autonomy, and esprit de corps. State-certified education and the resulting sense of entitlement to a secure (if by no means wealthy) position with well-earned rights, proximity to power and the state, the claim to serve the public interest and to understand this interest better than anyone in the private sector – this was the image that high- and mid-ranking civil servants had of themselves and that they displayed toward the public.¹⁶

(2). Of course, there were numerous private businesspeople both large and small in Germany – merchants and manufacturers, capitalists and bankers, railroad company directors, industrialists, and stockbrokers – whose profile was sharply distinct from the civil servant type: oriented toward the market and profit, ready for risk and innovation, accustomed to competition and capable of self-assertion, intent on individual autonomy, insistent on property and achievement. In the end, German industrialization also followed capitalist dictates, by no means under the direction of the state's authority. And one does find recurring examples of a bourgeois economic critique of the all-too-restrictive authoritarian state and its bureaucracy.¹⁷

Nevertheless, bureaucratic spirit and orientation toward the state seem to have been more widespread in the German entrepreneurial class than in the entrepreneurial classes of other Western countries. On this point one may offer a few, easily multiplied illustrations:

As the comparison of German and American industrial enterprises and railways in the nineteenth century demonstrates, the model of public administration powerfully shaped the formation of private-sector economic management in Germany but not in America. Civil servants switching over to business positions in the private sector often served as mediators. The competitiveness of German enterprises certainly benefited thereby.¹⁸ Another example: the titles "Commercial Councilor" (*Kommerzienrat*) and "Privy Commercial Councilor" (*Geheimer Kommerzienrat*) in Prussia were awarded by the ministerial bureaucracy, in part on the recommendation of mid-ranking officials, to especially successful, worthy, and reliable entrepreneurs. They were titles that put the honoree on equal footing, for purposes of protocol, with military officers and senior civil servants – for example, at the celebration of a royal birthday, where invitations were issued by the *Oberpräsident*. In approximately 750 cases studied (in Prussia during the nineteenth century), there was but a single instance in which a businessperson turned down one of these titles, and then only because he was convinced that the simple title of Commercial Councilor was beneath him and that he deserved to be given the higher-ranking title of Privy Commercial Councilor. The titles were highly coveted in Prussia and, as a rule, were only conferred after exhaustive

verifications. It was a state-sanctioned seal of quality that enhanced social recognition, while also augmenting creditworthiness and bringing concomitant commercial success. In a certain sense, it constituted an act of state elevating an upper stratum of entrepreneurs above the masses of businesspeople. And they suffered it gladly. In 1900, Friedrich Naumann spoke of a generation "in which one would rather be called Herr Commercial Councilor than Herr Baron." The suffix of "Councilor" (____-rat) implied a widely desired equal ranking with the highly esteemed civil service class.¹⁹ Other aspects of this widespread title system show that a kind of creeping bureaucratization affected German culture, the economic bourgeoisie included. This repeatedly struck travelers from England and the United States. German businesspeople only rarely demanded extreme antigovernmental laissez-faire policy. In fact, they expected a great deal from the state. And the gradual, uncommonly (by European comparison) early and successful transition to an interventionist state beginning in the 1870s ran up against little resistance from the big established industrial associations. Big cartels and conglomerates certainly did arise with the assistance of the state. "Organized capitalism" is one expression that has been used. The typical difference between entrepreneurs and civil servants lost some of its distinctiveness this way – earlier and more quickly than in other countries.²⁰

(3). Everywhere in Europe and North America, processes of professionalization were taking place during the nineteenth century; sharply defined expert vocations were taking shape whose members had disposal over specialized, usually academic training. On this foundation they demanded a monopoly on the supply of services they delivered, asserted their autonomy, and built successful organizations – for the purpose of professional self-control and interest advocacy. These trends proceeded along similar lines in different countries, but in international comparison – for example, in an Anglo-German comparison of physicians – one thing stands out with ever greater clarity: in Germany much more clearly than in England, the professionalization of such vocations rested on university education prepared and standardized by the state. German, and especially Prussian, doctors were far more able than their English colleagues to rely on official ordinances (as in 1851/52) that drove their nonprofessional or even semi-professional competitors – "quacks" – from the market. In contrast to their English colleagues, the spokespeople for professional organizations in Germany repeatedly looked to the model of the well-situated high-level civil servant when justifying political demands for professional status.²¹

(4). Finally, we take a look into that broad and expanding area on the margins of the *Bürgertum*, where belonging to the *Bürgertum* was questionable and precarious. In the Germany of 1900, as in other countries,

there was disproportionally rapid growth in the category of private-sector salaried employees, of accountants and foremen, of shop assistants and office clerks, of male and increasingly female secretaries. Then (as today) there was a universal distinction between salaried employees and wage workers, between white-collar employees and blue-collar workers. But in Germany the collective self-identification and outside assessment of this salariat just taking shape displayed certain peculiarities not found in the United States, England, or France:

As indicated even by the self-designation "*Privatbeamte*" ("private official"), the rising class of salaried employees chose the public civil service as its reference group, its model, for orientation and emulation. This civil service orientation of many low- and mid-ranking white-collar employees took a practical turn when it was used to obtain social insurance resembling civil servants' benefits during the first decade of the twentieth century. In the white-collar associations' agitation for a special insurance fund distinct from the general social insurance that workers had, white-collar employees in Germany constituted themselves as a social group. The *Angestelltenversicherungsgesetz* (Salaried Employees Insurance Law) of 1911 marked this campaign's success. It contributed in the following decades to making the distinction between worker and salaried employee even sharper than before, for now this distinction had a juridical dimension (initially only in insurance law, but soon in general labor and social welfare law as well) – very much in contrast to arrangements in most other countries (with the exception, here as elsewhere, of the very similar Austria). In international comparison, the "collar line" (white-collar vs. blue-collar) proves more pronounced in Germany because of the civil-service model's great attractiveness in this marginal zone of petty (lower middle class) *Bürgerlichkeit* and because of state-bureaucratic social welfare intervention (among other reasons).²²

Many other instances could be cited showing how the German *Bürger*tum was shaped by bureaucracy as well as oriented toward and encumbered by the state. Thus, one might refer to the state-penetrated school and vocational-training system and the associated system of authorization. One would need to discuss peculiarities of German liberalism, which rarely argued in an extremely anti-governmental way. One might refer to the proximity of the Protestant churches to the state; in Germany, wholly in contrast to England and the United States, Protestant pastors were practically civil servants.²³ And one would certainly have to go into the *Untertan* ("subject") mentality, which Heinrich Mann certainly exaggerated in his satirical sketch of Diedrich Hessling but which he just as surely did not pick out of thin air.

However, I shall leave off here and end with an open question: How does one interpret this state-encumberedness of *Bürgerlichkeit* in Germany? Are we witnessing a variant of *Bürgerlichkeit* that is distinct from other variants (more at a distance from the state, less state-penetrated) – partly advantageous, partly detrimental? Or in this state-encumberedness and bureaucratic formation are we witnessing a state of affairs indicating that all the talk about a special deficiency of *Bürgerlichkeit* in Germany is not groundless? This is more or less how Max Weber saw it; he was fascinated by the German civil-service state, while also linking it to the weakness he excoriated in the German *Bürgertum* and its culture. He mocked the system of titles, the insurance mentality already present among students, the professorial social reformers going by the name of *Kathedersozialisten* (lectern socialists) – because they were marks of social bureaucratization and bourgeois weakness. And indeed: Does not the social figure of the civil servant stand in a certain kind of tension to the autonomous, self-reliant citizen? This was how some contemporaries in the nineteenth century saw it, in contrast to most historians today. If one leafs through encyclopedias and other writings from the nineteenth century – from Hegel, through Riehl, to Weber – for definitions of “*Bürgertum*” then in use, one frequently finds the civil servant not included unconditionally as part of the *Bürgertum*. In the linguistic usage of the times, there certainly were tensions between the concepts of civil servant and citizen.²⁴ And if a capacity for mature self-regulation and a rejection of state bridling and state welfare belong to the idea of a truly civil (*bürgerlich*) society – then the ways that the authoritarian state shaped the German *Bürgertum* mark off a delicate limit to its *Bürgerlichkeit*.

Notes

In essence, the theses of this essay go back to the results of a research project carried out in 1986/87 at Bielefeld's Zentrum für interdisziplinäre Forschung, “*Bürgertum, Bürgerlichkeit, und bürgerliche Gesellschaft – Das 19. Jahrhundert im europäischen Vergleich.*” Cf. *Bürgertum im 19. Jahrhundert. Deutschland im europäischen Vergleich*, ed. J. Kocka and U. Frevert, 3 vols. (Munich, 1988); rev. partial ed.: *Bürgertum im 19. Jahrhundert*, ed. J. Kocka, 3 vols. (Göttingen, 1995); *ibid.*, vol. 1, pp. 76-84, bibliography; a selection in English: *Bourgeois Society in Nineteenth Century Europe*, ed. J. Kocka and A. Mitchell (Oxford, 1993).

1. The figures are according to: J. Kocka, "Zur Schichtung der preußischen Bevölkerung während der industriellen Revolution," in *Geschichte als Aufgabe: Festschrift für Otto Büsch*, ed. W. Treue (Berlin, 1988), pp. 357-90, tables 1 and 4.
2. Cf. G. Crossick and H.-G. Haupt, eds., *Shopkeepers and Master Artisans in Nineteenth-Century Europe* (London, 1984); J. Kocka, *Die Angestellten in der deutschen Geschichte 1850 bis 1980: Vom Privatbeamten zum angestellten Arbeitnehmer* (Göttingen, 1981). The German word "Bürger" has different meanings: burgher (of the medieval and early modern town), bourgeois or middle-class person, and citizen. Here we deal with "Bürger" in the second meaning. But cf. chapter 13 below, where the ambivalence of the concept is discussed further.
3. Cf. W. Długoborski, "Die Bürgertumsforschung in Polen," *SFB-Arbeitspapier*, no. 3 (Bielefeld, August 1987). Essays on different countries in: *Bürgertum im 19. Jahrhundert*, ed. Kocka (1995), vol. 1.
4. Esp. important: M.R. Lepsius, "Bürgertum als Gegenstand der Sozialgeschichte," in *Sozialgeschichte IV*, ed. W. Schieder and V. Sellin (Göttingen, 1987), pp. 61-80. For overviews of the literature, see: J. Kocka, "La bourgeoisie dans l'histoire moderne et contemporaine de l'Allemagne: recherches et débats récents," *Le mouvement social* 136 (July/September 1986): 5-28; J. Kocka, "Bürgertum und Bürgerlichkeit als Probleme der deutschen Geschichte vom späten 18. zum frühen 20. Jahrhundert," in *Bürger und Bürgerlichkeit im 19. Jahrhundert*, ed. J. Kocka (Göttingen, 1987), pp. 21-63. Since then, inter alia: H.-U. Wehler, *Deutsche Gesellschaftsgeschichte* (Munich, 1987), vol. 1, pp. 177-217; vol. 2, pp. 174-241; H.-U. Wehler, *Aus der Geschichte lernen?* (Munich, 1988), pp. 161-255; L. Gall, *Bürgertum in Deutschland* (Berlin, 1989); L. Gall, ed., *Stadt und Bürgertum im 19. Jahrhundert* (Munich, 1990). Also *Bildungsbürgertum im 19. Jahrhundert*, parts 1-4 (Stuttgart, 1985-1992), the conclusions of a conference series from the Bad Homburg "Arbeitskreis für moderne Sozialgeschichte"; and especially the results of the Bielefeld *Sonderforschungsbereich* "Sozialgeschichte der neuzeitlichen Bürgertums: Deutschland im internationalen Vergleich" (since 1986), published in the series: "Bürgertum: Beiträge zur europäischen Gesellschaftsgeschichte" (vol. 1 of this series appeared as H.-J. Puhle, ed., *Bürger in der Gesellschaft der Neuzeit: Wirtschaft – Politik – Kultur* [Göttingen, 1991]). The literature on this topic is growing rapidly. Examples from abroad include: R. Romanelli, "Political debate, social history, and the Italian 'Borghesia,'" *Journal of Modern History* 63 (1991): 717-39; V. Bácskai, ed., *Bürgertum und bürgerliche Entwicklung in Mittel- und Osteuropa*, 2 vols. (Budapest, 1986); E. Bruckmüller et al., eds., *Bürgertum in der Habsburgermonarchie* (Vienna, 1990); A. Daumard, *Les bourgeois et la bourgeoisie en France* (Paris, 1987). The literature on the urban Bürgertum of the eighteenth century is well developed. See, for example, R. Vierhaus, ed., *Bürger und Bürgerlichkeit im Zeitalter der Aufklärung* (Heidelberg, 1981); and, for the transition, L. Gall (ed.) *Vom alten zum neuen Bürgertum: Die mitteleuropäische Stadt im Umbruch 1780-1820* (Munich, 1992).
5. Cf. W. Ruppert, *Bürgerlicher Wandel: Studien zur Herbildung einer nationalen deutschen Kultur im 18. Jahrhundert* (Frankfurt a.M., 1981); U. Herrmann, ed., "Die Bildung des Bürgers" – *Die Formierung der bürgerlichen Gesellschaft und die Gebildeten im 18. Jahrhundert* (Weinheim, 1982); R. Vierhaus, ed., *Aufklärung als Prozeß* (Hamburg, 1988).
6. This shift in the frontlines demarcating the Bürgertum can be traced in the history of concepts. Cf. Kocka, "Das europäische Muster und der deutsche Fall," in *Bürgertum im 19. Jahrhundert*, ed. Kocka (1995), vol. 1, pp. 22-25.
7. This may explain why the notion of a comprehensive Bürgertum plays such an important role in Central European intellectual and research traditions.
8. This basic idea may also be found in M.R. Lepsius, "Zur Soziologie des Bürgertums und der Bürgerlichkeit," in *Bürger und Bürgerlichkeit*, ed. Kocka, pp. 79-100, esp. 82-86.

9. Cf. the contributions by H. Bausinger and T. Nipperdey in *Bürger und Bürgerlichkeit*, ed. Kocka, pp. 121-48; W. Kaschuba, "Deutsche Bürgerlichkeit nach 1800," in *Bürgertum im 19. Jahrhundert*, ed. Kocka (1995), vol. 3, pp. 9-44; F.H. Tenbruck, "Bürgerliche Kultur," in *Kultur und Gesellschaft*, ed. F. Neidhardt et. al. (Opladen, 1986), pp. 263-85.
10. Cf. P. Bourdieu, *Die feinen Unterschiede. Kritik der gesellschaftlichen Urteilskraft* (Frankfurt a.M., 1982).
11. On the limits to the embourgeoisement of workers, the petite bourgeois, white-collar employees, and peasants, see the contributions by H. Zwahr, H.-G. Haupt, M. König, and W. Jacobeit in *Bürgertum im 19. Jahrhundert*, ed. Kocka (1995).
12. On the generalizing pretensions of bourgeois culture, which distinguished it from aristocratic, peasant, or artisan culture, see, above all, W. Vosskamp, "Der Bildungsroman in Deutschland und die Frühgeschichte seiner Rezeption in England," in *Bürgertum im 19. Jahrhundert*, ed. Kocka., vol. 3, pp. 257-86.
13. Early and influential: T. Nipperdey, "1933 und die Kontinuität der deutschen Geschichte," *Historische Zeitschrift* 227 (1978): 86-111; G. Eley and D. Blackbourn, *The Peculiarities of German History: Bourgeois Society and Politics in 19th-Century Germany* (Oxford, 1984). Additional literature references and arguments in J. Kocka, "Deutsche Geschichte vor Hitler," in J. Kocka, *Geschichte und Aufklärung* (Göttingen, 1989), pp. 101-113, 187-90.
14. For details, see Kocka, "Das europäische Muster und der deutsche Fall," in *Bürgertum im 19. Jahrhundert*, ed. Kocka (1995), vol. 1, pp. 41-55.
15. On this point generally, see J. Kocka, "Capitalism and Bureaucracy in German Industrialisation before 1914," *Economic History Review* 33 (1981): 453-68.
16. The relevant local and regional studies demonstrate the strong position civil servants enjoyed among the Bürgertum. See, e.g., H. Bühler, *Das beamtete Bürgertum in Göppingen und sein soziales Verhalten 1815-1848* (Göppingen, 1976); D. Wegmann, *Die leitenden staatlichen Verwaltungsbeamten der Provinz Westfalen 1815-1918* (Münster, 1969).
17. Cf. F. Zunkel, "Beamtenschaft und Unternehmertum beim Aufbau der Ruhrindustrie 1849-1800," *Tradition* 9 (1964): 261-76.
18. Cf. J. Kocka, "Eisenbahnverwaltung in der industriellen Revolution. Deutsch-amerikanische Vergleiche," in *Historia socialis et oeconomica*, ed. H. Kellenbenz and H. Pohl (Stuttgart, 1987), pp. 259-77.
19. Cf. K. Kaudelka-Hanisich, *Preußische Kommerzienräte in der Provinz Westfalen und im Regierungsbezirk Düsseldorf 1810-1918* (Dortmund, 1992).
20. Cf. the Anglo-German comparison by R. Tilly, "Unternehmermoral und -verhalten im 19. Jahrhundert," in *Bürgertum im 19. Jahrhundert*, ed. Kocka (1995), vol. 2, pp. 35-64. Also cf. chap. 7 of the present volume.
21. Cf. esp. C. Huerkamp, "Ärzte in Deutschland und England: Gemeinsamkeiten und Unterschiede des ärztlichen Professionalisierungsprozesses im 19. Jahrhundert," ms. (Bielefeld, 1986); C. Huerkamp, *Der Aufstieg der Ärzte im 19. Jahrhundert: Vom gelehrten Stand zum professionellen Experten: Das Beispiel Preußens* (Göttingen, 1985); W. Conze and J. Kocka, eds., *Bildungsbürgertum im 19. Jahrhundert, Teil I: Bildungssystem und Professionalisierung in internationalen Vergleichen* (Stuttgart, 1985); H. Siegrist (ed.), *Bürgerliche Berufe: Zur Sozialgeschichte der freien und akademischen Berufe im internationalen Vergleich* (Göttingen, 1988); H. Siegrist, *Advokat, Bürger, und Staat: Sozialgeschichte der Rechtsanwälte in Deutschland, Italien und der Schweiz (18.-20. Jh.)* (Frankfurt a.M., 1996).
22. Cf. J. Kocka, "Class Formation, Interest Articulation, and Public Policy: The Origins of the German White-Collar Class in the Late Nineteenth and Early Twentieth Centuries," in *Organizing Interests in Western Europe*, ed. S. Berger (Cambridge, 1981), pp. 63-82.

23. Cf. O. Janz, *Bürger besonderer Art: Evangelische Pfarrer in Preußen 1850-1914* (Berlin, 1994).
24. M. Weber, *Wirtschaftsgeschichte* (Munich, 1923), p. 271; additional examples in H. Henning, *Das westdeutsche Bürgertum in der Epoche der Hochindustrialisierung 1860-1914, Teil I: Das Bildungsbürgertum in den preussischen Westprovinzen* (Wiesbaden, 1972), pp. 23, 31. On Weber's critique of social bureaucratization, see M. Weber, *Gesammelte Aufsätze zur Soziologie und Sozialpolitik* (Tübingen, 1924), pp. 390, 413ff.; W.J. Mommsen, *Max Weber und die deutsche Politik, 1890-1920*, 2nd ed. (Tübingen, 1974), pp. 17, 94, 179ff.

Chapter 10

Social Mobility and the Formation of the Working Class

In the 1960s and 1970s, social mobility was a favorite subject of social historians, particularly in North America. While serving many different research interests, many of these studies also contributed to our knowledge about working-class history. It was important to learn more about the changing connection between workers' migrations, occupational change, the chances of climbing up the hierarchy of social positions (however defined), and the risks of skidding down the same hierarchy. It would be difficult to discuss what it means to be a worker – or rather a specific type of worker at a specific place during a certain period of time – without knowing anything about the probable permanence or temporariness of his or her position. It is much easier to say something about the meaning that upward social mobility – in the sense of moving up on a hierarchy of occupationally defined status positions – had for those who moved and those who stayed in their positions if one knows whether such moves were usually paralleled by improvements of income and property. The study of intergenerational mobility and marriage patterns may tell something about the families in which workers lived. The laborious and sophisticated monographs of the so-called “new social history” of the 1960s and 1970s have contributed much to our knowledge about such problems and continue to do so.¹

Usually, however, historical mobility studies of this kind were not integrated into the lively debate about the formation of the working class, or classes in general. They usually have gotten along without spending much time theorizing about class or exploring the mechanisms

Notes for this section begin on page 226.

that made or unmade classes.² On the other hand, recent debates on the making of the working class have tended to stress the importance of common experiences and cultures in the processes of class formation without being really interested in a systematic and largely quantitative study of social mobility.³

In this essay it will be argued that the historical study of social mobility, if adequately conceptualized, can contribute significantly to the study of the making or unmaking of the working class. It also will be argued that embedding mobility studies in such a conceptual context can make them more meaningful. In the course of this argument, a concept of class formation will be sketched that is not particularly original, but useful, I hope, for the study of other dimensions of working class history, as well. In addition, some empirical results of recent studies on worker mobility and marriage patterns in nineteenth-century Germany will be reported.

Mobility, Workers, and Industrialization

Hartmut Kaelble has summarized recent studies on the history of social mobility in different countries.⁴ One of the main questions regarding the nineteenth century has been: did the Industrial Revolution, that is, the breakthrough phase of industrial capitalism (characterized by the increasing importance of market relations and wage labor; centralization and mechanization of production; the separation between household and work place; economic growth; and accelerated urbanization) increase or decrease workers' chances of climbing up and their risks of sliding down? Of course, this question is closely related to the continuing debate on whether the "standard of living," broadly conceived, improved or worsened in the course of the Industrial Revolution, particularly: whether the lot of the lower classes got better or worse as a consequence of the rise of industrial capitalism.

For a long while, most authors held that the Industrial Revolution produced a clear increase in the rates of both geographic and social mobility. General considerations and detailed studies on single cities seemed to show that opportunities for a lower-class person (broadly conceived as a manual worker in a rather dependent position) to move into at least a lower-middle-class position with some income, autonomy, and esteem increased in the middle decades of the nineteenth century.⁵ These results stood against another more "pessimistic" view, according to which social barriers became more rigid in the course of the Industrial Revolution and, in particular, the move from a journey-

man's to a master's position became less frequent, while degradation and downward mobility increased.⁶

More recent studies have strongly supported a third view. They seem to show that the early phases of industrialization brought a dramatic increase of migration and occupational mobility (for example, from the position of a cottage worker or agricultural worker to that of a skilled or unskilled factory worker) but no clear rise in the rates of upward mobility (from lower to middle occupational strata).⁷ Such results are in harmony with another historiographic trend of recent years: increasingly it has been stressed (or stressed again) that one should not overestimate the Industrial Revolution and the rise of the factory system as a decisive turning point in the evolution of social relations, social classes, and the making of the working class in particular. The more the cottage workers and artisans drew historians' attention, the more doubt was cast on whether the Industrial Revolution proper (in Germany, from the 1840s to the 1870s) really meant the new departure suggested by the term "revolution" and the frequent dichotomy "industrial/pre-industrial."⁸ The merits and limits of this view cannot be discussed here. But regarding the question of Industrial Revolution and social mobility, some new results can be reported from a project studying intergenerational social mobility, marriage patterns, and the role of the family in three Westphalian locales in the nineteenth century.⁹

Quernheim (near Bielefeld) was investigated during the period 1801-1870. This was a large protoindustrial village characterized by peasant holdings of medium-size and a large proportion (more than 50 percent) of families below peasant status who often had a very small piece of land but lived mainly from market-oriented cottage work (weaving and spinning) and/or worked for the peasants, on whom they were dependent in many respects; they were called *Heuerlinge*. There were other artisans, tradespeople, and merchants, and a few professionals as well, but the Industrial Revolution did not really start in Quernheim in the period under investigation, apart from the founding of some cigar-making manufactories in the 1860s.

Quernheim was compared with *Borghorst* (1830-1910), a large village near the Dutch border with a strong proto-industrial tradition (spinning and weaving of linen and cotton) that did experience the Industrial Revolution, particularly in the textile sector, in which factories were founded in the 1860s and later.

The third place under investigation was *Bielefeld*, the East Westphalian capital (1830-1910), which had an old commercial and administrative tradition and was a well-established city with 10,000 inhabitants even before the Industrial Revolution brought textile and metalwork factories, new growth, and much change from the 1850s on.

Using parish registers as our main source, we compared the occupational status of the grooms at the time of marriage with the occupational status of their fathers as indicated by the grooms at the same time. Reflecting gender-specific patterns of registration, identification, and work, the source does not give the brides' occupational status. This is why it does not allow the study of the occupational mobility of women as individuals. There are other methodological limits of this approach;¹⁰ however, this approach made it possible to compare different places over long periods of time. We used similar schemes of occupational classification in all three places. For some of our questions, manual workers in dependent positions (including agricultural workers, Heuerlinge, cottage workers, servants, journeymen, factory workers with various skills, wage workers in general, but excluding self-employed master artisans and tradespeople) and the lowest categories of white-collar workers (such as messengers, security guards, office helpers) were combined in the broad category "working class." How often had sons from such a working-class background, at the time of marriage, climbed to an occupation higher on the social ladder (such as master artisan, merchant, small businessman, civil servant, salaried employee, teacher, or land-owning peasant)? How did the rates compare over time and between the three places?

In rural, protoindustrial *Quernheim* – where the Industrial Revolution did not take hold – only seven percent of working class sons (usually sons of Heuerlinge) proved to be upwardly mobile, and this rate did not change between 1800 and 1870. The rates of downward mobility were high and relatively stable, as well. Thirty-five percent of all peasants' sons slid down into the position of Heuerlinge before 1860, and into the position of Heuerlinge or cigarmakers after 1860.

In *Bielefeld* the upward-mobility rate of working-class sons was twice as high: 15 percent (1830-1910). Six percent of the sons of Heuerlinge and agricultural workers, 15 percent of unskilled workers' sons, 16 percent of cottage workers' sons, 20 percent of skilled workers' sons, and 33 percent of the sons of lower white-collar workers reached a position beyond the working-class category (see Table 2). In spite of the Industrial Revolution, which here occurred after 1850, there was no overall change in this rate. It is true there were some shifts among the subgroups: the chances of the offspring of agricultural workers diminished, the chances of the sons of skilled manual workers slightly increased, and those of the sons of lower white-collar workers jumped. And upward mobility of cottage workers' sons, particularly into positions as self-employed artisans and tradespeople, increased again in the late nineteenth century, when cottage work stagnated and shrank and sons in this group *could not* stick to their fathers' positions due to structural change. But taken together, there were fifteen climbers among every hundred

working-class sons over the entire period between 1830 and 1910. The rates of downward mobility, however, increased during industrialization. 27 percent of all sons of master artisans, merchants, and businesspeople skidded into the working class in 1830/50; the proportion grew to 47 percent and 43 percent in 1860/80 and 1890/1910.

Change was different in *Borghorst*. The upward-mobility rate was only 6 percent in 1830-1850, when Borghorst was still an agricultural-protoidustrial village, about as low as in Quernheim. In the period of the local Industrial Revolution (1860-1880), the rate jumped to 11 percent. And it reached Bielefeld standards (15 percent) in the industrial village or town of 1880-1910. Intergenerational upward-mobility rates increased in all categories, but they grew most among cottage workers when their numbers stagnated and shrank and when their sons were compelled to do something else. Over the same period downward mobility from the nonagricultural middle class (master artisans, self-employed tradespeople, merchants, small businesspeople, civil servants, and so forth) decreased, and the intergenerational stability of these groups, which were expanding, grew.

Apparently industrialization had a very different effect on social mobility if a locale was urbanized before than it did if the locale was not. Relative to rural settings, upward mobility was high and downward mobility was modest in the urban environment. When industrialization occurred, the overall upward-mobility rates for working-class people did not change much, while skidding became more frequent for those higher up. Most mobility studies so far have explored cities.¹¹ In rural areas, however, climbing was more difficult and skidding more frequent to start with. Protoindustrialization, in this respect, did not mean much of a change. In Quernheim and Borghorst, extensive market-oriented, merchant-dominated, family-based cottage industry apparently was absorbed without changing much of the traditional pattern of social relations, as far as one can tell from mobility rates, marriage patterns, and marriage age.¹² When the Industrial Revolution finally occurred, it meant something different than in the town. It brought a dramatic increase of upward mobility for working-class people; and for those higher up, downward mobility slightly decreased.

Of course, one should not overstate the importance of these results. They come from only three cases, and other cases may be different. Rural areas with other inheritance customs – in our cases one of the sons inherited the whole land – and with less proto-industrialization and less population growth may have experienced less downward mobility before the Industrial Revolution. Towns with a less differentiated and flexible industrial and commercial middle class may have offered fewer opportunities for upward mobility before the Industrial Revolution than Biele-

feld. In addition, we have not studied the whole complexity of class relations, but only one dimension: intergenerational social mobility of men. The source basis was limited. Still, these results seem to warn against underestimating the fundamental change occurring on the way from proto-industrialization to Industrial Revolution proper.

It is not easy to relate such findings to the standard-of-living debate that has moved far beyond the investigation of real wages and that tries to assess what capitalist industrialization meant to the life and experiences of the workers. There are two reasons that the *meaning* of these mobility patterns to those who climbed, skidded, or stayed where they were is so hard to discover. First, the broad categories used in this essay include so many different social groups and configurations, changing over time, that it is impossible simply to equate upward mobility (measured as moves between broad occupational categories) and improvement of life chances. Second, we have very little knowledge about how those concerned actually experienced social mobility and what preferences they had. At least it is hard to generalize about this. In many cases, families of cottage workers, journeymen, and skilled factory workers may have preferred their sons and daughters to stay in the occupational world of their parents instead of climbing into the world of the middle class. Pride and fear, family concerns, and security aims may have motivated such conservative family strategies.¹³ In many other cases, lower-class parents seem to have worked to place their children in positions better than their own.¹⁴ Without knowing more about the aims and preferences of those families and individuals, it is hard to assess whether certain changes were experienced as improvements and gains, or as threats and losses. Still, if one takes into account the tremendous hardship, dependence, and insecurity of those Quernheim agricultural workers and Heuerlinge,¹⁵ and if one sees how quickly they sent their sons into the new cigarmakers' positions once such positions became available after 1860, it is hard to resist the impression that moving up the social ladder, if only a very small step, was, for the increasing minority who managed to do so, more of a relief than a loss or a burden.

Class Formation as an Analytical Tool

There is a second way in which social-mobility studies can contribute to the study of the history of the working class. One can try to investigate intra- and intergenerational forms of social mobility in terms of what they contribute to, or indicate about, the formation or devolution of a class.

By class formation – or class “structuration” (A. Giddens)¹⁶ – I mean the complicated process in which “economic classes” (multitudes of

families¹⁷ and individuals who, due to a common economic position, share structural presuppositions of manifest interests – in other words, latent interests – in contrast to other latent interests, but nothing else) are transformed into “social classes,” that is, social groups of families and individuals who, in addition to sharing a common economic position and common latent interests, share a collective identity as members of the class (including common experiences, mutual communication, common symbols, some sort of class consciousness and solidarity) and who even form common organizations and develop the propensity for collective action, in contrast to, and conflict with, other classes and, perhaps, the state.¹⁸ In fact it seems useful to analytically differentiate between three dimensions: (1). “economic class”: class as a multitude of families and individuals sharing an economic situation and, as a result, latent interests; (2). “social class”: class as a group of families and individuals who, in addition to belonging to an “economic class,” share a common social identity (some degree of internal cohesion and mutual communication; common experiences, fears, and aspirations; common manifest interests; awareness or consciousness of their common characteristics as a class; a common culture); (3) “class in action”: class as a group of families and individuals who, in addition to belonging to the same “economic class” and to the same “social class,” form common organizations and/or act collectively as members of a class. Of course, there is never one class alone. Classes are results of relations. On dimension (1), class interests are in *contrast* to interests of those belonging to other classes; on dimension (2), *tensions* develop between the members of one class and the members of other classes, and the distinction between one’s own class and other classes is in peoples’ experiences, thoughts, and language; on dimension (3), *conflicts* develop between classes and, perhaps, between a class and the state.¹⁹ Having a counterpart is essential for the structuration of a class.

Some points should be stressed or made more explicit. It should be clear that “class,” defined in this way, is not a “thing” or any other static entity but a process. Classes are always in the process of becoming or disappearing, in the making or unmaking.²⁰ It would be wrong to suppose a causal uni-linearity between dimensions (1), (2), and (3); nor is there a clear chronological order from (1) to (2) to (3). While common class loyalties, on dimension (2), may serve as a basis for collective class action (3), class conflicts (3) strongly affect the evolution of loyalties and class cultures (2), and both tensions and conflicts, (2) and (3), influence the economic situation and class relations on dimension (1): just think of the role of strikes and protests as incentives for early mechanization and rationalization of the workplace. It is a task for historical research to find out how the three dimensions of class formation interact.²¹

Class structuration is a complicated process. While on a very general level the economic situation – in our case, wage work in a system undergoing capitalist industrialization²² – and the ensuing latent interests may be identical or similar in two cases, for example, two regions or two countries, the process of class formation may strongly differ in speed, scope, ideological content, forms, and results. For these processes are influenced by many factors: by older surviving structures and traditions, the speed and timing of industrialization, the character of other classes, particularities of culture and politics, and so forth. So there are many historical, geographical, and branch specific variations in the formation of class.

The processes of class formation are not automatic, not irreversible, and never complete.²³ Besides different patterns of class, one can have “more” or “less” class. Usually we can only identify tendencies and countertendencies and shifts of tendencies. Processes of class formation are never finished, because there are always *competing* economic structures, affiliations, loyalties, and battlefronts that crisscross the class lines, build bridges across them, and departmentalize the classes internally, following nonclass lines (for example, occupational, ethnic, religious, and so forth). Let us give several examples. Increasingly, contractual wage work and lack of capital ownership were the decisive structural conditions that create a communality of latent interests on the basis of which workers can be regarded as an “economic class,” which under certain conditions may develop into some kind of “social class” and perhaps even “class in action.” But in the reality of the nineteenth century wage work rarely appeared in its pure form. There usually were, so to speak, competing work structures (noncontractual work with “feudal” controls in agriculture, handicrafts, and elsewhere) and “mixed” situations in which persons or families did wage work (for the merchant capitalist), cultivated a very small piece of land (perhaps on lease), owned some means of production (for example, a weaving loom), and sometimes even employed helpers. Wage work is very old; but before becoming the dominant mode, it emerged very slowly out of a complex system of nonwage work relations that continued to co-exist: wage work embedded.²⁴ Another example: national identities or the common interests of those who belong to a specific industry (in contrast to the interests of those in other industries) tend to counteract the class tensions and conflicts within a nation or industry. A third example: skilled workers in a factory may strongly regard themselves as members of a certain craft (for example, plumbers); this identity may override their identification with a comprehensive working class, and often has done so. Finally: to be Irish in Troy (upstate New York) in the 1880s may have been more important than being a factory worker; ethnic organizations including

people from different classes were frequently more important for people's identity, life, collective actions, and political behavior than the unions or other working-class organizations.²⁵ Every person has different affiliations. There is no logic or necessity that class affiliation has to be, or become, dominant. There is no doubt that the relative weight of the different affiliations changes over time. How it does so, why, and with what consequences for the individuals involved, and for the system at large, is a problem for empirical research.

If this makes sense, we can turn it into a methodological device. How can we empirically describe whether and how class structuration took place in order to then get on to the questions why it did so and what the consequences were? One way of exploring it would seem to concentrate on two types of related questions:

(1). Which were the relevant lines of distinction, tension, and conflict segmenting and dividing the emerging working class internally? Were they becoming sharper and more effective, or were they becoming less powerful and less effective, in the sphere of work, with respect to income, self-consciousness, experiences, manifest interests, language, loyalties, organization, and so forth? Did the different groups within the working class become more or less similar? Were there barriers keeping working-class subgroups, such as women and men, unskilled and skilled workers or different crafts, away from each other? Did they become more rigid, or were they permeated by increasing contacts, communication, and even cooperation? To the extent that homogeneity within the working class increased and internal fragmentation receded, one can say that class formation proceeded. On the other hand, when differences, tensions, and conflicts within the class became more prominent, this would indicate a process of class devolution.

(2). What was the relative significance of the "class line," the outer boundary of the working class, in structuring social reality? How visible and rigid was the distinction between workers and those who owned and controlled, and how does this change over time? Did neighborhoods include people from both sides of the class divide? Did people marry across the divide? Was the recruitment basis of worker organizations and movements limited to wage workers, or were small masters and still small employers included? How did this change over time, and why? Did people identify as "common people" (including wage workers but also small self-employed "workers," and all those who typologically are in-between)? Or did they identify as (wage) workers when they talked about their problems, fears, and hopes? Did the official occupational census of a country, by the categories used, reflect distinctions along class lines (as early in Germany) or did it prefer a functional categorization (as in the United States even in the twentieth century)? Did the

main concepts of the social and political language reflect the experience of class?²⁶ The more clearly the class line emerged as a divide both in “objective” reality and in the minds of the people, in the economic, social, cultural, and political spheres (relative to other lines of differentiation, such as income and regional background), the more one can say that class formation proceeded – and vice versa.

Class Fragmentation and Cohesion

No doubt, this approach is rather formal and abstract. This is why it can be applied to very different subject areas in order to relate them to one another and to the study of the formation of the working class. Take social mobility.

Historian Hartmut Zwähr has published an important monograph on the formation of the Leipzig working class, from the 1830s to the 1870s.²⁷ His approach is very similar to the one discussed here. Among other things, he analyzes the socioeconomic situation (employment, work discipline, security, fluctuations, income, and so forth) of various working-class groups in Leipzig: different types of journeymen, day laborers, agricultural workers, factory workers, printers, cigarmakers, and others. He thinks that, socio-economically, these groups became more similar to one another, due to the increasing impact of capitalism and the beginnings of the Industrial Revolution.²⁸ He continues by statistically analyzing the social origins of the different groups of workers, and of the godfathers they chose for their children, on the basis of unpublished city and church records. His data on intergenerational social mobility and godfather selection show high fragmentation of the Leipzig working class throughout the period. Among typesetters, for example, the offspring of typesetters were strongly over-represented; among unskilled workers, the sons of unskilled workers. But over the decades these inheritance rates declined slightly; it became more frequent for the sons of skilled and unskilled workers to move out of their father’s occupational category into other working-class categories. At the same time, the proportion of workers who came from (lower) middle-class families (usually master artisan families) declined, and the proportion of those who came from working-class families (“born proletariat”) increased.²⁹

Every second printer and typesetter in Leipzig in the 1820s and 1830s selected a godfather from his own occupational group. Other crafts were similarly exclusive. But over the decades it became somewhat more frequent that godfather selection crossed occupational and skill lines; for example, it became more frequent that printers and typesetters accepted unskilled workers as godfathers of their children. At the same

time, it became proportionally less frequent that godfathers with a non-working-class background (businesspeople, pub keepers, master artisans, teachers, civil servants, and so forth) served in working class families.

Not without justification, Zwahr interprets these results as indicators of decreasing social distance between, and increasing social integration of, the different subgroups of the emerging working class of Leipzig; communication and contacts between different types of workers became more frequent. At the same time, the dividing line between working class and middle class became less permeable. In terms of both social recruitment and godfather relations, the emerging working class became more "self-sufficient" and more separated from the rest of society – whether by choice or repulsion is left open. Zwahr accepts these findings as indicating advancement in the process of the social formation of the Leipzig proletariat. He also tries to show, with less success, that the "born proletarian," that is, workers coming from working class families, were more involved in the labor movement and in socialist politics than the workers of middle-class background, concluding that the economic formation and the social formation of the class were paralleled by a political-ideological formation aiming at class conscious protests, socialist organization, and Marxist ideology.

Our parish-register-based studies on social mobility and marriage patterns in several nineteenth-century Westphalian locales (discussed above) asked similar questions. We differentiated between agrarian workers (including Heuerlinge), cottage workers (usually weavers and spinners), unskilled (nonagrarian) workers, skilled (nonagrarian) workers and lower non-manual employees. There were high barriers between these five working-class groups. Take Bielefeld as an example: 61 percent of the sons of the skilled workers, 41 percent of the sons of the cottage workers, and 37 percent of the sons of the unskilled workers belonged to the same group as their fathers when they married (1830-1910). Only the highly mobile lower white-collar employees and the agrarian workers (who usually left the agrarian context when they came to Bielefeld and appeared in the local registers) had much smaller inheritance rates (see Table 2). The marriage patterns were similarly fragmented, but here the barriers between the groups were much more permeable, as Table 1 documents. The sons of agrarian workers, unskilled workers, and skilled workers married women with the same family background as their own more often than they married women from any other single group. In the course of time, however, these barriers between the working-class groups were crossed more often. A slightly increasing proportion of grooms belonged to a group other than their fathers', without, however, leaving the working class altogether (see Table 2). This is particularly true of sons of cottage workers, a group whose numbers stagnated and shrank. But

Table 1 Intermarriage of Working-Class Sons, Bielefeld, 1830-1910
(by percentage of groom's father's occupation category)³⁰

| Occupation category of groom's father | Occupation category of bride's father | | | | | | | N |
|---------------------------------------|---------------------------------------|----|----|----|----|----|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 6* | 7** | |
| 1. agrarian worker | 43 | 7 | 15 | 16 | 2 | 1 | 16 | 311 |
| 2. cottage worker | 19 | 11 | 24 | 19 | 4 | 1 | 22 | 70 |
| 3. unskilled worker | 15 | 3 | 34 | 25 | 4 | 2 | 18 | 271 |
| 4. skilled worker | 15 | 5 | 18 | 31 | 4 | 3 | 24 | 348 |
| 5. lower white-collar worker | 10 | 3 | 18 | 25 | 10 | 7 | 27 | 40 |

* 6 = other working class

** 7 = middle/upper classes

Table 2 Intergenerational Occupational Mobility of Working-Class Sons, Bielefeld, 1830-1910 (by percentage of groom's father's occupation category)³¹

| Status of groom's father | Status of groom | 1 | 2 | 3 | 4 | 5 | 6 | 7 | N |
|----------------------------|-----------------|------|-------|-------|-------|--------|-------|-------|-----|
| agrarian workers | 1830-1850 | 7.6+ | 18.2+ | 39.4+ | 12.1- | 3.0+ | 10.6+ | 9.0- | 66 |
| | 1860-1880 | 5.9+ | 18.2+ | 35.9+ | 28.8- | - | 5.3+ | 5.0- | 170 |
| | 1890-1910 | 4.3+ | 1.1+ | 45.2+ | 44.1+ | 1.1- | 1.1+ | 3.2- | 93 |
| | 1830-1910 | 5.8+ | 13.4+ | 39.2+ | 29.8- | 0.9- | 5.2+ | 5.7- | 329 |
| cottage workers | 1830-1850 | - | 56.3+ | 6.3- | 12.5- | - | - | 25.1- | 26 |
| | 1860-1880 | - | 54.3+ | 11.4- | 17.1- | 2.9+ | 2.9- | 11.5- | 35 |
| | 1890-1910 | - | 12.0+ | 16.0- | 52.0+ | 4.0+/- | - | 16.0- | 25 |
| | 1830-1910 | - | 40.8+ | 11.8- | 27.6- | 2.6- | 1.3- | 15.7- | 76 |
| unskilled workers | 1830-1850 | - | 8.3- | 35.9+ | 38.5+ | - | 2.6- | 17.9- | 39 |
| | 1860-1880 | 1.3- | 5.1- | 33.3+ | 41.0+ | 1.3- | 1.3- | 16.7- | 78 |
| | 1890-1910 | - | 0.6- | 39.4+ | 41.7- | 4.4+ | 0.6- | 13.4- | 180 |
| | 1830-1910 | 0.3- | 2.4- | 37.4+ | 41.1+ | 3.0+ | 1.0- | 14.9- | 297 |
| skilled workers | 1830-1850 | - | 9.1- | 6.5- | 64.9+ | - | - | 19.5- | 77 |
| | 1860-1880 | 0.8- | 3.1- | 10.9- | 63.6+ | 2.3+ | 0.8- | 18.6- | 129 |
| | 1890-1910 | - | - | 16.9- | 58.1+ | 2.3- | 1.2+ | 21.6- | 172 |
| | 1830-1910 | 0.3- | 2.9- | 12.7- | 61.4+ | 1.9- | 0.8- | 20.2- | 378 |
| lower white-collar workers | 1830-1850 | - | 8.3- | 16.7- | 33.3+ | 8.3+ | 8.3+ | 25.0- | 12 |
| | 1860-1880 | - | - | 18.2- | 45.5+ | 9.1+ | - | 27.3+ | 11 |
| | 1890-1910 | - | - | 9.1- | 40.9- | 9.1+ | - | 40.8+ | 22 |
| | 1830-1910 | - | 2.2- | 13.3- | 40.0+ | 8.9+ | 2.2- | 33.4+ | 45 |

the inheritance rates of the other groups went down slightly, too, with the exception of the unskilled workers and the white-collar employees. In terms of intergenerational mobility, there was a slight narrowing of social distances between skilled and unskilled workers, between agrarian

workers and skilled/unskilled workers (a one-way flow), and between cottage workers and skilled/unskilled workers (also a one-way flow). On the other hand, the distance between the lower white-collar workers and the manual workers grew.

There was no clear trend in the changes in marriage patterns. But in most cases, intermarriages between groups were more frequent than occupational exchanges between them. In intensifying contacts, communication, and community between different types of workers, marriage relations were more important, it seems, than occupational exchange.

There are similar findings from the case studies on Borghorst and Quernheim. All figures make clear that there remained a remarkable degree of internal class fragmentation. But to a limited degree, the internal integration of the local working classes in those three places advanced. This was less true for the other aspect of class structuration. As for the line separating the working class from other classes and strata, there was no clear trend towards increasing distinctiveness. As much as one can tell from our indicators, the gulf between the working class and the middle class did not grow more distinct in Westphalia. Rather, the picture remains ambivalent. In the Bielefeld case, downward mobility across the "class line" increased while upward mobility remained rather constant. In Borghorst, upward mobility from the working class into nonworking-class positions increased while skidding down into the working class became less frequent. In Quernheim, upward mobility across the "class line" was rare and did not change much; downward moves were much more frequent, but they slightly decreased. In some ways the "class line" became a more rigid barrier to social mobility, in some ways not.

In the cases reported, changes in social mobility, godfather selection, and intermarriage patterns seem to indicate that what had been only an "economic class" – a potential, so to speak – slowly developed into a "social class," though within clear limits.³² For it can be assumed that increasing interchange between subgroups in terms of occupational mobility, marriage relations, and godfather selection generated more common interests, intensified communication, and facilitated the exchange of experiences and traditions between the different working-class groups. There should have been a slight tendency toward a more general, more comprehensive, more homogeneous working-class experience, an experience that supplemented or perhaps dominated the group-specific experiences and identities each worker held as a member of a specific skill group, craft, ethnic group, or industry. In addition to increasing exchange through mobility and marriage, there were many other factors that worked in favor of such a more comprehensive working-class identity: for example, certain forms of discrimination and

repression (including undemocratic electoral and association laws) that affected workers of different backgrounds in similar ways. But of course there was never just one general working-class identity; a specific worker was never just a worker, but at the same time a miner in contrast to other occupations, a man or a woman, a skilled craftsman in contrast to the unskilled, an employee of a specific firm, and so forth. Which of these different dimensions of the worker's self-identity was dominant, exerting most influence over the worker's practical loyalties, affiliations, and actions, is an empirical question.

Research on residential patterns can be helpful in this respect. How much segregation was there along the class line? Did different groups of workers live in the same neighborhoods? Did the residential patterns support communication between working-class groups and separate them from other parts of the local society?³³ Research on other dimensions could apply similar questions. One can try, for example, to find out whether certain symbols of self-representation, songs, and so forth were specific to individual crafts or whether they tended to be shared across occupations by the members of the emerging class.³⁴ The vocabulary of politics can be analyzed by applying the same type of questions. It is significant that in the 1830s and 1840s German journeymen started to speak of themselves as "*Arbeiter*" ("workers") instead of using craft-specific terms like tailor or printer, alone. And it is interesting to observe that after 1848 the word increasingly referred only to workers in dependent positions, while at the start it could include small self-employed masters as well.³⁵

It should be stressed that increasing communication, interchange, integration, and homogeneity on the level of collective experiences and identities, customs and cultures, beliefs and aspirations, fears and hopes, and organization does *not* necessarily mean: increasing radicalization or increasing adoption of a specific ideology by the emerging class. Class formation, as it is here understood, can occur and has occurred with different ideological results, depending on many different factors, including cultural traditions, constitutional setting, and the peculiarities of class conflicts in the specific country or region.³⁶ In order to study ideologies and programs, other types of questions are necessary, in addition to those discussed in this essay.

But these questions serve well when applied to the study of collective actions, protests, and organizations. The protests, strikes, and demands of eighteenth- and early-nineteenth-century journeymen usually were craft-specific. It is important to find out when and why workers of different crafts and workers of different skills joined hands in protest and perhaps entered the same associations. It would be equally important to study when and why nonwage workers, particularly master artisans

(even the small ones who did not employ helpers), no longer participated in certain protests and associations; when they left the emerging movement, or when they had to leave, and why. It is through systematic analysis of the social composition of the participants in collective actions (such as strikes and other protests), and of the recruitment base of formal organizations (such as workers' parties or unions), that we can find out whether a movement becomes a real working-class movement – in contrast to the more traditional movements of single crafts, and in contrast to “crowds” and popular movements whose bases cross class lines by, for example, including wage workers and self-employed master artisans or peasants. Again the programmatic and ideological content may differ, and it would have to be studied by asking other types of questions. Ideology is an interesting topic for research, but it should not be used as the primary criterion for judging whether a movement is a working-class movement.³⁷

This should suffice to show that the approach discussed here, concentrating on the structuration of the working class by looking at the changing meaning of its internal divisions and outer boundaries, can guide very different questions and apply to very different dimensions of working-class history. It brings them together in a flexible way. It is only a partial approach, a rather formal framework that does not replace more specific questions and more concrete approaches but tries to stimulate and coordinate them. Since this approach conceives of the rise of labor organizations as one dimension of the process of working-class formation, it brings working-class and labor-movement history together.

In the German cases discussed in this essay, the internal integration and structuration of the working class advanced very slowly, did not advance in every respect, and left deep internal divisions intact. Similar questions have been asked and methods applied to some British cases, with different results. Recent studies of the “labour aristocracy” in nineteenth-century British cities have tended to stress that the multidimensional gulf between a rather exclusive upper stratum of the skilled workers and the rest of the working class did not tend to narrow before 1914; on the contrary, it sometimes broadened and deepened. These studies investigated various dimensions of this gulf, which sharply divided the working class in Britain, particularly in the second half of the nineteenth century: income, ownership, residence, lifestyles, cultures, values, union participation, political attitudes, and so forth. They also analyzed mobility and marriage patterns in order to assess the social distances between single occupations.³⁸

The German studies reported here did not study precisely the same problem. Rather, they were interested in the division between skilled and unskilled workers (which is not identical with the difference between a

labor aristocracy, in the British sense, and the bulk of the working class). Breaking down his data by occupation, Zwahr should have found such a labor aristocracy if it had existed or developed in Leipzig. But his results point in the opposite direction. The Westphalian studies stayed on a more aggregate level. But in the case of Bielefeld it became quite clear that the social distance between the manual workers and the lower white-collar employees (clerks, office helpers, messengers, and so forth) grew in the late nineteenth century and early twentieth. In Germany the debate on the "labor aristocracy" was always much weaker than in Britain and the debate on the issue of the white-collar employees much stronger. It is probable that a rather clear distinction between blue-collar workers (*Arbeiter*) and white-collar employees (*Angestellte*) developed earlier in Germany than in Britain while the gulf between an upper stratum of highly skilled manual workers and the rest of the (manual) working class was less manifest in Germany than in Britain. Comparisons of the social vocabulary and union structures would seem to support this. One should further explore this hypothesis, because it might reveal a lot about the peculiarities of the processes of class formation in both countries.³⁹

Concepts and Historical Reality

The approach discussed in this essay does not work without a clear definition of "working class." Otherwise one cannot explore the changing meaning of its internal divisions and outer boundaries. Of course it is impossible to define which groups belong to the working class in the sense of "social class" or "class in action." This is an empirical question that finds different answers in different historical situations, since economic classes are never fully transformed into social classes and classes in action. But it is necessary to specify which socioeconomic categories, in the author's view, belong to the working class in the sense of "economic class" and why.⁴⁰ In this chapter, "working class" has been understood as "wage workers' class," composed of *Lohnarbeiter*, i.e. skilled and unskilled, male and female persons who work for wages, including their families. It has been assumed that persons belong to the working class – in the sense of economic class – to the extent that they do not own and control means of production (capital) but sell their labor as a commodity to somebody who does. Wage work is based on a contractual relationship between legally free and equal partners: it is regulated by market criteria. The status of a wage worker is not a short-time, transitory stage in the life cycle but more or less permanent.⁴¹

There are powerful theories that offer good reasons for such a conceptual choice. One need not accept every aspect of Marx's value theory

of labor in order to find him, nevertheless, convincing in stressing the basic importance of the commodity form of work and the basic distinction between wage workers and capital owners, or rather, between employees and employers. Though differing from Marx in many respects, Weber's theory of class, by closely relating class position to market position, also strongly advocates a clear analytical separation between wage workers and self-employed owners. One might refer to other theorists in this context as well.

It is well known, however, that wage work in this sense rarely appeared in its pure form during the Industrial Revolution. Rather, elements of wage work often were imbedded in nonwage work structures of high complexity. There were remnants of corporate and feudal obligations and rights, particularly in the countryside and in the urban crafts. There was still much work for subsistence, as opposed to work for the market. In the case of many cottage workers, it was not quite clear whether they sold their work, or, instead, the products of their work. Many of them, in addition, owned some means of production. Subcontracting was frequent, even in centralized firms, and consequently many workers took part in the system of "co-exploitation" (Hobsbawm): they were wage workers and at the same time employers. There also were many self-employed artisans who did not employ anybody, but were not employed either, though they were perhaps dependent on merchants or factories. People moved back and forth not only between agricultural and industrial pursuits but also between positions of petty producers, household workers, and wage workers.

Slowly, with the rise of capitalism, and particularly with the Industrial Revolution, wage work became more important, and eventually dominant, however. This is why the concept "working class" as used in this essay does not correspond only to certain aspects *existing* in the reality of the Industrial Revolution but also to essential *tendencies* of that reality. The concept selects components of reality that are in the process of becoming more important. After all, concepts do not just mirror historical reality; they interpret it. They have to be based on reality – of course – but also on perspectives. They are not identical with, but in a way purer than, historical reality. One of the tasks of historians is to keep in mind this changing tension (or distance) between their concepts and historical reality (as it is shown in the sources) and to communicate it to their audience.⁴²

Take the concept "working class" as developed in this essay. It includes industrial, agricultural, and service workers, as long as they seem to sufficiently fulfill the criteria of being wage workers.⁴³ It also includes lower white-collar employees. But excluded are independent master artisans and self-employed tradespeople, because they cannot be regarded as wage

workers proper. In reality, however, there were many "mixed" cases and transitory forms: semidependent artisans with or without hired help; workers within family economies; temporary wage workers. It is also true that masters and journeymen very often continued to share social background, work culture, and other experiences. There were many common interests and forms of cooperation between masters and men and those who were both, especially when they were threatened by advancing capitalism and sometimes by the dynamics of state power.⁴⁴ But nevertheless, there was, very early, a growing split between journeymen and masters and between wage workers and owners (even when they were small and did not employ workers themselves). On the German scene, this split was as old as the labor movement itself. It can be observed in Berlin in the 1840s, all over Germany in the revolution of 1848, in the revival of the labor movement in the early 1860s, and in the wave of strikes of the early 1870s. And it is possible to demonstrate that this emergent split was due largely to different interests and different class positions between employed and self-employed artisans.⁴⁵

This is not a development particular to Germany. In the long run, labor movements became wage-worker movements everywhere in Europe and North America. Movements of self-employed artisans developed separately, very often with a strong antiproletarian, lower-middle-class orientation. But, for long periods of time, this line was not clearly drawn. And there seem to be important differences between Germany and Britain, in this respect. *Arbeiterbewegung* (labor movement) and *Handwerkerbewegung* (master artisans' movement) separated early in Germany, right at the beginning of industrialization; 1848 was a decisive year. The line of distinction between wage workers (of all sorts) and self-employed artisans, the "class line" in the sense the term is used in this essay, probably developed earlier and more clearly in Germany than in Britain — due, perhaps, to the different ways older corporate and absolutist structures and traditions survived and functioned in the two countries.⁴⁶ If this turns out to be correct, one might argue that the categories of Marx's political economy, which is based on a theory of wage work and capital, reflect particularities of the German situation to a larger extent than conceded in Marx's oeuvre. This opens up interesting questions for comparative research. It also implies something about the historical nature of systematic concepts and about national differences in the writing of social history.⁴⁷

Notes

1. Outstanding examples: S. Thernstrom, *The Other Bostonians: Poverty and Progress in the American Metropolis, 1880-1970* (Cambridge, MA, 1973); M.B. Katz, *The People of Hamilton, Canada West: Family and Class in a Mid-Nineteenth-Century City* (Cambridge, MA, 1975); C. and S. Griffen, *Natives and Newcomers: The Ordering of Opportunity in Mid-Nineteenth-Century Poughkeepsie* (Cambridge, MA, 1978). One of the few studies of this kind dealing with the German case: D.F. Crew, *Town in the Ruhr: A Social History of Bochum, 1860-1914* (New York, 1979). Cf. the review articles: J. Modell, "Die 'Neue Sozialgeschichte' in Amerika," *Geschichte und Gesellschaft* 1 (1975): 155-70; J. Kocka, "Stadtgeschichte, Mobilität und Schichtung," *Archiv für Sozialgeschichte* 18 (1978): 546-58.
2. There are important exceptions, however: Y. Lequin, *Les ouvriers de la région lyonnaise (1848-1914): La formation de la classe ouvrière régionale* (Lyon, 1977), pp. 206-37. (He applies questions very similar to those discussed in this essay.) H. Zwahr's studies on Leipzig will be discussed below. Some recent studies on the English labor aristocracy have analyzed mobility and marriage patterns to demonstrate the split, if not the formation, of the working class in English cities before 1914. Cf. note 38, below.
3. Cf. E.P. Thompson, *The Making of the English Working Class* (London, 1963) and many books influenced by this seminal work.
4. H. Kaelble, *Historische Mobilitätsforschung: Westeuropa und die USA im 19. und 20. Jahrhundert* (Darmstadt, 1978), pp. 40-72.
5. Cf. the studies by G. Pourcher, G. Kleining, J.C. Goyder/J.E. Curtis, G. Carlsson, H. van Dijk, R. Mayntz and H. Daheim, reported in *ibid.*, pp. 11-14.
6. Cf. F.D. Marquardt, "Sozialer Aufstieg, Sozialer Abstieg und die Entstehung der Berliner Arbeiterklasse, 1806-1848," *Geschichte und Gesellschaft* 1 (1975): 43-77; *idem*, "A Working Class in Berlin in the 1840's?" in *Sozialgeschichte Heute: Festschrift für Hans Rosenberg zum 70. Geburtstag*, ed. H.-U. Wehler (Göttingen, 1974), pp. 191-210.
7. Cf. the studies by P. Knights, S. Blumin, C. Griffen, and T. Rishoy, reported by Kaelble, *Historische Mobilitätsforschung*, pp. 14-18.
8. Besides Thompson's *The Making*, cf. P. Kriedte, H. Medick, and J. Schlumbohm, *Industrialisierung vor der Industrialisierung: Gewerbliche Warenproduktion auf dem Land in der Formationsperiode des Kapitalismus* (Göttingen, 1977); W.H. Sewell, Jr., *Work and Revolution in France: The Language of Labor from the Old Regime to 1848* (Princeton, NJ, 1980).
9. Details and tables in J. Kocka, K. Ditt, J. Mooser, H. Reif, and R. Schüren, *Familie und soziale Platzierung* (Opladen, 1980).
10. All those who married at other places (e.g., because they had moved away) do not appear in the sources; neither do those who did not marry at all. The occupational status of the sons is registered rather early in their lives, namely, at the time of marriage; this may lead to an underestimation of their occupational success, because they may have climbed or continued to climb after marriage. Social mobility is measured as moves between broadly defined occupational categories, neglecting other criteria; it is clear, however, that occupation does not tell everything about the status of a person; somebody may not change occupation but change status as to income, home ownership, or even position. The designations of occupations as given in the sources were sometimes ambiguous. The combination and the ranking of occupations was based on rough assessments. Over long time periods, it is likely that the meaning of the social distance between occupational categories changes slightly, but this is not reflected by the rank orders and schemes, which are used to measure moves up and down.

11. An exception in the German literature is: P. Borscheid, *Textilarbeiterschaft in der Industrialisierung: Soziale Lage und Mobilität in Württemberg (19. Jahrhundert)* (Stuttgart, 1978). He discusses social mobility; but he uses very different schemes of categorization, so comparison becomes difficult.
12. For that, see Kocka, Ditt, et al., *Familie und soziale Platzierung*. The average marriage age of the Quernheim working class was not pushed down by the protoindustrial "Heuerling" (working at home within a family unit) who married rather late (age 26 to 27) but, after 1860, by the new type of cigar production worker (often working in a centralized manufactory and marrying, on average, at 23 to 24).
13. Cf. H. Kaelble, "Einführung und Auswertung," in *Arbeiter im Industrialisierungsprozess: Herkunft, Lage und Verhalten*, ed. W. Conze and U. Engelhardt (Stuttgart, 1979), p. 29; Marquardt, "Sozialer Aufstieg"; W.H. Sewell, "Social Mobility in a Nineteenth-Century European City: Some Findings and Implications," *Journal of Interdisciplinary History* 7 (1976): 217-33.
14. For Borghorst (1830-1911), R. Schüren has shown that the chances of sons and daughters from working-class families getting into a middle-class occupation or marrying a middle-class man strongly correlated with the wealth of the family from which they came. This would seem to indicate that these workers helped their children move upward when they could. See Kocka, Ditt, et al., *Familie und soziale Platzierung*.
15. J. Mooser, *Ländliche Klassengesellschaft 1770-1848. Bauern und Unterschichten, Landwirtschaft und Gewerbe im östlichen Westfalen* (Göttingen, 1984).
16. A. Giddens, *The Class Structure of the Advanced Societies* (New York, 1975), p. 105.
17. Cf. J. Schumpeter, "Die sozialen Klassen im ethnisch homogenen Milieu" in idem, *Aufsätze zur Soziologie* (Tübingen, 1953), p. 158: "The family, rather than the physical person, is the real individual of class theory."
18. The concepts are similar to those used by M. Weber, *Wirtschaft und Gesellschaft*, (Köln/Berlin, 1964), vol. 1, pp. 223-27; vol. 2 pp. 679-82 (who distinguishes between "Marktklasse" and "soziale Klasse"). It would be possible to express the same idea in Marxian language and speak of the transformation of the "Klasse an sich" into the "Klasse für sich." "Latent interests" is used by R. Dahrendorf, *Class and Class Conflict in Industrial Society* (Stanford, 1959), p. 173f. But I do not follow Dahrendorf in his attempt to de-economize the class concept by stressing power and subordination as the major distinction between the two classes. The emphasis on symbols as representing the community of a class and distinguishing it from other classes can be found in P. Bourdieu, "Klassenstellung und Klassenlage," in idem, *Zur Soziologie der symbolischen Formen* (Frankfurt, 1974), p. 57f., and *La Distinction* (Paris, 1979), p. 271f.
19. I have used this "model" for an analysis of German society in the First World War: *Klassengesellschaft im Krieg: Deutsche Sozialgeschichte 1914-1918*, 2nd ed. (Göttingen, 1978), pp. 3-5; references, particularly to the relevant passages in the works of Marx and Engels: *ibid.*, pp. 148-50 (n13-18).
20. This notion was stressed by Thompson, *The Making*, p. 9f. Also see T. Geiger, "Zur Theorie des Klassenbegriffs und der proletarischen Klasse" (1930), in idem, *Arbeiten zur Soziologie* (Neuwied, 1962), pp. 206-59, esp. 225-27.
21. E.P. Thompson ("Eighteenth-Century English Society: Class Struggle without Class?" *Social History* 3 [1978]: 149) thinks that class conflict always precedes class consciousness and even class itself. But it would be impossible to explain class conflicts without having a notion of a logically and chronologically preceding class-situation or "economic class" in the sense of this essay.
22. Of course, there are alternative ways of defining the economic basis of classes. Cf. Weber's discussion of class in *Wirtschaft und Gesellschaft*, in which market position is stressed as the criterion according to which members of classes (in the sense of economic classes) belong together; the articles by H.-U. Wehler and J. Kocka in: H.-

- U. Wehler, ed., *Klassen in der europäischen Sozialgeschichte* (Göttingen, 1979), pp. 9-32, 137-165.
23. In contrast to those who try to date the finishing point of the making of a working class: Among others, H. Zwahr (see below and H. Zwahr, *Zur Konstituierung des Proletariats als Klasse: Strukturuntersuchung über das Leipziger Proletariat während der industriellen Revolution* [Berlin, 1978], p. 164), thinks that the formation of the Leipzig proletariat reached its end in the late 1860s.
 24. Such "mixed" situations are well described in R. Braun's monographs on an industrializing region near Zürich: *Industrialisierung und Volksleben* (1960), new ed. (Göttingen, 1979); *Sozialer und kultureller Wandel in einem ländlichen Industriegebiet im 19. und 20. Jahrhundert* (Erlenbach-Zürich, 1965).
 25. Cf., e.g., D.J. Walkowitz, *Worker City, Company Town: Iron and Cotton-Worker Protest in Troy and Cohoes, New York, 1855-1884* (Urbana, IL, 1978).
 26. Cf. the examples given in E.J. Hobsbawm, "The Aristocracy of Labour Reconsidered," in *Proceedings of the Seventh International Economic History Congress*, ed. M. Flinn (Edinburgh, 1978), vol. 2, p. 458.
 27. Zwahr, *Zur Konstituierung*.
 28. Whether the results of Zwahr are fully borne out by his evidence cannot be discussed here. See my review of the book in *Archiv für Sozialgeschichte* 20 (1980): 584-592.
 29. Zwahr, *Zur Konstituierung*, pp. 116, 119ff., 144ff., pass.; the concept "born proletariat" is also used by K. Tenfelde in his social history of the Ruhr miners: *Sozialgeschichte der Bergarbeiter an der Ruhr im 19. Jahrhundert* (Bonn-Bad Godesberg, 1977), p. 513, 577f.
 30. Table by K. Ditt from Kocka, Ditt, et al., *Familie und soziale Platzierung*, p. 312. These figures result from comparing the occupational status of the groom's father with the occupational status of the bride's father. This explains why agrarian workers' sons could so frequently marry within their group (43 percent) but could not stay within their group occupationally (Table 2). The table reads as follows: 43 percent of the sons of agrarian workers married women whose fathers were agrarian workers as well; 7 percent of the sons of agrarian workers married women whose fathers were cottage workers, etc.
 31. Table by K. Ditt in *ibid.*, p. 302 (+ means: index of association higher than 1; - means: index of association below 1). In order to differentiate the broad groups "skilled workers," "unskilled workers," etc., one could investigate the exchanges and intermarriages between single occupations. Cf. *ibid.*, p. 309: 47 percent of the sons of masons, 46 percent of the sons of mechanics, 23 percent of the sons of carpenters, and 16 percent of the sons of tailors had the same or a very similar occupation as their fathers when they married.
 32. Both Zwahr and the study on Westphalia deal with some presumable causes of the changes in the mobility and marriage patterns: changes of the work organization and occupational structure, the role of the family, migrations, the educational system, etc. This cannot be discussed here.
 33. On Berlin: I. Thienel, *Städtewachstum im Industrialisierungsprozess des 19. Jahrhunderts* (Berlin, 1973); on Augsburg: I. Fischer, *Industrialisierung, sozialer Konflikt und politische Willensbildung in der Stadtgemeinde* (Augsburg, 1977); on Bielefeld: F.W. Bratvogel, *Stadtentwicklung und Wohnverhältnisse unter dem Einfluß der Industrialisierung im 19. Jahrhundert* (Dortmund, 1989). On the role of communication structures in the formation of the working class, see the important article by K. Tenfelde, "Arbeiterschaft, Arbeitsmarkt und Kommunikationsstrukturen im Ruhrgebiet in den 50er Jahren des 19. Jahrhunderts," *Archiv für Sozialgeschichte* 16 (1976): pp. 1-60.
 34. On the relative decline of occupational subcultures and the increasing awareness of the common position as skilled wage-earners in late nineteenth century Edinburgh, cf.: R.Q. Gray, *The Labour Aristocracy in Victorian Edinburgh* (Oxford, 1976), pp. 91-95.

35. Cf. W. Conze, "Arbeiter," in *Geschichtliche Grundbegriffe: Historisches Lexikon zur politischen Sprache in Deutschland*, ed. O. Brunner et al. (Stuttgart, 1972), vol. 1, pp. 216-42, esp. 228f.
36. In contrast, some Marxist writers maintain that increasing homogeneity and the decrease of internal sectionalism, in themselves, entail revolutionary class consciousness. This is the message in Foster's analysis of Oldham (J. Foster, *Class Struggle and the Industrial Revolution* [London, 1974]) and in Zwahr's book on Leipzig (Zwahr, *Zur Konstituierung*). The evidence does not bear out this assertion in either case, and there is no logical justification for it, either. Cf. the convincing comment on Foster by G. Stedman Jones, "Class Struggle and the Industrial Revolution," *New Left Review* (March/April 1975): 35-69, esp. 47-48. On Zwahr: my review as quoted in n. 28 above.
37. For the German developments, 1830s to 1870s, cf. W. Schieder, *Die Anfänge der deutschen Arbeiterbewegung: Die Auslandsvereine im Jahrzehnt nach der Julirevolution von 1830* (Stuttgart, 1963), p. 82ff.; D. Bergmann, "Die Berliner Arbeiterschaft in Vormärz und Revolution 1830-1850," in *Untersuchungen zur Geschichte der frühen Industrialisierung vornehmlich im Wirtschaftsraum Berlin/Brandenburg*, ed. O. Büsch (Berlin, 1971), pp. 456-511; U.E. Englehardt, "Gewerkschaftliches Organisationsverhalten in der ersten-Industrialisierungsphase" in *Arbeiter*, ed. Conze and Englehardt, pp. 372-402 (on the 1860s); W. Renzsch, *Arbeiterbewegung zwischen Kleinbürgertum und Proletariat* (Göttingen, 1980) (on the separation between self-employed artisans and workers in Berlin in the 1860s and 1870s).
38. Cf. Foster, *Class Struggle*; Gray, *The Labour Aristocracy*; G. Crossick, *An Artisan Elite in Victorian Society: Kentish London 1840-1880* (London, 1978); and a review of the literature, in Hobsbawm, "The Aristocracy."
39. Cf. the comparative remarks in E.J. Hobsbawm, "The Labour Aristocracy in Nineteenth-century Britain" in idem, *Labouring Men: Studies in the History of Labour* (London, 1968; Weidenfeld Goldback ed.) pp. 296-97; the comparisons in the final chapter of J. Kocka, *White Collar Workers in America 1890-1940* (London-Beverly Hills, 1980).
40. I miss a clear word on that in Thompson, *The Making*. "The class experience is largely determined by the productive relations into which men are born – or enter involuntarily" (p. 9). But Thompson does not say which aspects of the productive relations, in his view, constituted, or contributed to constituting, the working class that he is talking about. Is it lack of ownership of the means of production and surplus-producing wage work? Is it dependence on a capitalist market and loss of autonomy? Is it something else, or all of these together? The book has to pay the price for this conceptual vagueness: It is difficult for the reader to figure out which social groups belong to what is described as the working class in the making, and which social groups do not. E.g., what about petty producers and small masters? Under what conditions, by what criteria, are they part of the emerging working class or not? It is important to have answers to such questions, because without them it remains unclear how far the book's many generalizations on "the English working class" are meant to reach, and what really holds the different groups and parts of the emerging class together. Without answers to such questions, it is very difficult to distinguish the categories "common people" and "working class," "crowds" and "working class protests," "plebeian" and "proletarian." I do not find much additional clarification in idem, "Eighteenth-Century English Society," pp. 145, 149-50.
41. In contrast, most American mobility studies ignore the distinction between classes in the sense of this essay. They distinguish (different strata of) blue collar and (different strata of) white collar, putting both self-employed and salaried people in the same category, e.g. "lower white collar." This makes it impossible to interpret their data and results in terms of working class formation as suggested here.

42. In this respect, one can learn from Weber, who was much less a conceptual nominalist than he is often thought to be. I borrow from his "idealtypical" approach. Idealtypes are not just constructions of the researcher but also must correspond to important moments and tendencies of reality. Cf. M. Weber, *Gesammelte Aufsätze zur Wissenschaftslehre*, 3rd ed. (Tübingen, 1968), p. 191, for a clear definition of "idealtypes"; on the uses of idealtypes in social history: J. Kocka, *Sozialgeschichte* (Göttingen, 1977), pp. 86-88.
43. This raises thorny problems of categorization, which I leave aside for the moment.
44. The study of Renzsch, *Arbeiterbewegung*, has good examples, especially from the sewing industry of the 1870s. For the earlier decades: J. Bergmann, *Das Berliner Handwerk in den Frühphasen der Industrialisierung* (Berlin, 1973).
45. Cf. the titles in notes 37 and 44, above; H. Meusch, *Die Handwerkerbewegung von 1848-1849* (Aalfeld, 1949); and the chapter "The Break between Masters and Men" (including a short comparison with England) in: S. Volkov, *The Rise of Popular Anti-Modernism in Germany: The Urban Master Artisans, 1873-1896* (Princeton, NJ, 1978), pp. 123-46. Also: B. Moore, Jr., *Injustice: The Social Bases of Obedience and Revolt*, (London, 1978), chap. 5.
46. Besides Volkov, *The Rise*, see, for the later period, A. Winkler, "From Social Protectionism to National Socialism: German Small Business Movement in Comparative Perspective," *Journal of Modern History* 48 (1976): 1-18.
47. The class formation approach, as applied in this chapter, has been criticized for neglecting gender and agency, experience and discourse as well as culture and the autonomous impact of politics. Cf. K. Canning, *Languages of Labour and Gender. Female Factory Work in Germany, 1850-1914* (Ithaca-London, 1996), pp. 1-15. Working-class and labor history now receive less academic and public attention than they used to. Research on the history of social mobility has largely stopped. But cf. R. Schüren, *Soziale Mobilität. Muster, Veränderungen und Bedingungen im 19. und 20. Jahrhundert* (St. Katharinen, 1989); R. Federspiel, *Soziale Mobilität im Berlin des zwanzigsten Jahrhunderts* (Berlin-New York, 1999). New developments can be observed. Cf. L.R. Berlanstein, ed., *Rethinking Labour History. Essays on Discourse and Class Analysis* (Urbana, Ill., 1993); *International Review of Social History* 38 (1993), Suppl. 1: The End of Labour History?, ed. M. van der Linden; J. Kocka, "New Trends in Labour Movement Historiography: A German Perspective," *International Review of Social History* 42 (1997), pp. 67-78; Th. Welskopp, "Klasse als Befindlichkeit? Vergleichende Arbeitergeschichte vor der kulturhistorischen Herausforderung," *Archiv für Sozialgeschichte* 38 (1998), pp. 301-336 (review of the literature and programmatic suggestions). A redefinition of "class" for historical usage has been proposed, new ideas are clearly emerging. Cf. id., "Ein modernes Klassenkonzept für die vergleichende Geschichte industrialisierender und industrieller Gesellschaften," in: *Mikropolitik im Unternehmen. Arbeitsbeziehungen und Machtstrukturen in Großunternehmen des 20. Jahrhunderts*, K. Lauschke and Th. Welskopp, ed. (Essen, 1994), pp. 48-106.

What follows? If maintained the class formation concept will have to be enriched, broadened, modified, and differentiated. This seems to be possible. Cf. J. Kocka, *Arbeitsverhältnisse und Arbeiterexistenzen. Grundlagen der Klassenbildung im 19. Jahrhundert* (Bonn, 1990); id., *Arbeiterleben und Protest. Entstehung einer sozialen Klasse* (forthcoming). On the other hand: If one looks for analytical tools for integrating the different subfields of workers' and labor history instead of succumbing to the ongoing process of ever narrower specialization and ensuing fragmentation of scholarship, a refined concept of class formation may still be indispensable. Alternative approaches with similar synthetical power are hard to find.



The Middle Classes in Europe

The attractiveness of a concept rarely correlates with its precision. “Middle class” would seem to be a case in point. The concept has played a central role in – and has been shaped by – political discourses ever since the late eighteenth century. It has been a pivotal concept in many historical interpretations of the modern period. In recent years the history of the middle class has become an area of intensive empirical research, particularly in Central Europe.¹

However, “generations of unsuspecting undergraduates have found the phrase ‘middle class’ a morass, a minefield, even a veritable Pandora’s box. It is certainly a chameleon among definitions.”² The English “middle class” is not identical with its French, German, or Italian equivalents, *bourgeoisie*, *Bürgertum*, and *borghesia*. *Mieszczaństwo* (Polish) and *mes-cane* (Russian) are even further away. In some languages (German, for example) the concept carries very different layers of meaning, reaching from “burgher” (in the sense of a legally privileged inhabitant of medieval and early modern towns) through “middle class” or “bourgeois” to “citizen.” The meanings have changed over time. Descriptive, analytical, and normative functions of the concept overlap; again and again, it has served not only as a “neutral” category used by observers and historians but also as a polemical or affirmative code word in public debates, social criticisms, and utopian visions.³

Still, there is a tendency toward conceptual convergence in the present literature, at least when it deals with the “long nineteenth century” that began in the eighteenth century and ended with World War I. The concept “middle class” comprises merchants, manufacturers, bankers, capitalists, entrepreneurs, and managers, as well as rentiers (those who

live on income from property without working), together with their families (lumped together in German as *Wirtschaftsbürgertum* – the economic middle class). It also comprises the families of doctors, lawyers, ministers, scientists and other professionals, professors of universities and secondary schools, intellectuals, men and women of letters, and academics, including those who serve as administrators and officials in public and private bureaucracies (all lumped together in German as *Bildungsbürgertum* – the educated middle class).

“Middle class” does not include nobles, peasants, manual workers, and the mass of lower-class people in general, although it is debatable where the exact boundaries should be drawn. There are groups in between that may be seen as part of the middle classes or not, such as military officers and artists. And there is a large, growing, heterogeneous category whose status changed in a typical way: Master artisans, retail merchants, innkeepers, and the like certainly were burghers of the early modern towns. They must be seen as part of the middle class in the eighteenth and early-nineteenth centuries. But as time went on, they moved (or were moved) to the margins of what “middle class” meant. In the latter part of the nineteenth century and in the twentieth, they were seen – frequently along with the growing number of low- and middle-ranking salaried employees and white-collar workers in both the private and public sectors – as belonging to the “lower middle classes,” the *Kleinbürgertum*, the *petite bourgeoisie* – that is, not to the middle class proper.⁴

Wherever possible, this essay concentrates on the middle class proper. That means that we speak of a small minority. In nineteenth-century Germany, middle-class families (*Bürgertum*) accounted for roughly 5 percent of the population. The percentage varied from country to country, corresponding to the ratio between urban and rural population. It was slightly larger in England and the West in general, smaller in the East and on the peripheries of Europe. It slowly grew in the course of time.⁵ Having decided in favor of a relatively narrow definition of “middle-class,” I shall use the adjective interchangeably with “bourgeois.”⁶

The Basic Pattern

What were the defining attributes of the middle class in the late eighteenth, nineteenth, and twentieth centuries? What characteristics were shared by businesspeople, rentiers, doctors, lawyers, clergy, and the others that distinguished them and their families from other social categories not belonging to the middle class? What were their common denominators and the *differentia specifica*, and how did they change over time?

If one takes the concept of "class" seriously, the middle class, in spite of the word, has never been a class, at least not in a Marxist sense, since it includes both self-employed and salaried persons and, more generally, persons with very different market positions. In contrast to the burghers of the late-medieval and early-modern periods, the nineteenth-century middle class cannot be seen as a corporate group (*Stand*), either, since it had no specific legal privileges. Two plausible theories have been proposed to explain the unifying and defining characteristics of the middle class: one relational, the other cultural. As we will see, these two theories are compatible, and both are needed to understand the evolution and devolution of the European middle class.

It is generally more likely that individuals will form social groups with some cohesion, common understanding, and potential for collective action if they experience tension and conflict with other social groups. By setting oneself apart from others, one gains identity. This is well known from the history of classes, religions, and ethnicities. The same holds true with respect to the European middle class as it emerged as a supralocal social formation in the second half of the eighteenth century and the beginning of the nineteenth.

Merchants, entrepreneurs and capitalists, professors, judges, journalists, ministers, and high-ranking civil servants differed in many respects, but they shared a sense of social distance from the privileged aristocracy and, on the Continent, from absolute monarchy. By stressing the principles of achievement and education, work and self-reliance, a vision of a modern, secularized, self-regulating, enlightened "civil society" emerged that was supported by many middle-class persons, in opposition to the privileges and autocracy of the *ancien régime*. It was largely a project of middle-class men, though it was hardly opposed by middle-class women, who in the long run would try to claim the principles of civil society for their own emancipation.

This was a complicated process with many exceptions. Middle-class families not only set themselves apart from the nobility; they also adopted some of its principles. Civil servants were agents of the state, but they were simultaneously part of the emerging middle class. Still, the various subgroups of the emerging middle class were to some degree united by their common opponents: the nobility, unrestricted absolutism, and religious orthodoxy. They developed common interests and experiences and a certain degree of shared self-understanding and common ideologies. In this way, the middle class constituted itself as a social formation that encompassed various occupational groups, sectors, and class positions.

In the course of the nineteenth century this line of distinction and tension lost much of its power, but it did not fade away altogether. The

blurring was due to the gradual destruction of the legal privileges of the nobility in most parts of Europe and to an increasing rapprochement between the upper grades of the middle classes and parts of the nobility. Simultaneously, another line of demarcation came into play – one that had not been altogether absent around 1800 but that had become more prominent in the middle third of the nineteenth century. Now a sharper boundary set the middle class apart from the lower strata: the emerging working class and “small people” in general, including the “petty bourgeois” lower middle class. In spite of their differences, late nineteenth-century industrialists, merchants and rentiers, lawyers and higher civil servants, professors, high school teachers, and scientists mostly shared a defensive or critical distance from “the people,” the “working class,” and the labor movement, and this was a significant factor in the evolution of their self-understanding, social alliances, and political commitments.⁷

While developing cohesion in opposition to people above and below, the middle class defined itself by its culture. Families from various middle-class categories shared a respect for individual achievement, on which they based their claims for rewards, recognition, and influence. They shared a positive attitude toward regular work, a propensity for rationality and emotional control, and a fundamental striving for independence, either individually or through associations. The middle class emphasized education. General education (*Bildung*) served as a basis on which they communicated with one another, one that distinguished them from others who did not share this type of (usually classical) education. Scholarly pursuits were respected, as were music, literature, and the arts.

For bourgeois culture, a specific ideal of family life was essential: the family as a purpose in itself, a community held together by emotional ties and fundamental loyalties. Strictly differentiated by sex and ultimately dominated by the paterfamilias, it was meant to be a haven protected from the world of competition and materialism, from politics and the public. It was a sphere of female-influenced privacy, although it was not without servants, whose work made it possible for the middle-class mother to give sufficient time to family life, transmitting “cultural capital” to the next generation. To the extent that the public and economic spheres became separated from the increasingly private household and family, the roles of men and women became more unequal; their circles of life moved further apart even though they stayed closely interrelated in other respects. Within the nineteenth-century middle class, this became the main trend. It has gradually reversed since the late nineteenth century, when women began to enter the public sphere – a slow and protracted process that has accelerated in the course of the twentieth century but has not yet been completed.⁸

Bourgeois culture could flourish only in towns and cities. There had to be peers with whom one could meet in clubs and associations, at feasts and at cultural events, in numbers that a rural environment could hardly offer. In order to participate fully in the practices of bourgeois culture, one needed a secure economic status, well beyond the subsistence minimum: means, space, and time. This has excluded large, though decreasing, majorities of most populations from becoming truly middle class. If one considers the cohesion and specificity of the *Bürgertum* to be defined by its culture and its *sociabilité*, one appreciates the importance of symbolic forms in middle-class daily life, of bourgeois table manners and conventions, of quotations from classical literature, titles, customs, and dress.⁹

These two major arguments make clear what the various middle-class groups had (and to some extent still have) in common: experiences and interests based on common opponents and a common culture. They also make clear that the defining particularity of the middle class is rather thin. To have common opponents and to share a culture defines those concerned only to a limited degree. In everything else, they differ: interests and experiences based on occupation and economic status, gender and region, religion and ethnicity. At any particular time, the middle class has been heterogeneous; within it, "many separate worlds could co-exist side by side."¹⁰

Comparisons

Some historians prefer the plural form, speaking of the "middle classes" in order to stress the heterogeneity of this social formation. The plural term seems to be particularly appropriate if one considers regional and national differences. Traditionally, middle-class cultures were rooted in towns. They had strong local components. It is true that merchants, administrators, and intellectuals soon formed supralocal and supraregional networks, and in the course of the nineteenth century something like the nationalization of the European middle classes took place. Still, they continued to be strongly differentiated and even fragmented by locality, region, and nation. It is beyond the scope of this essay to reconstruct the rich diversity of the changing European middle-class world. The following paragraphs sketch some major differences between middle classes in Western, Central, and Eastern Europe, including a few glances to the south and the north. They pertain to the "long" nineteenth century only.

The middle classes' relation to the nobility is a crucial factor that varied substantially from country to country. It was closely related to certain

characteristics of the old feudal-corporate order and the varying ways in which it came to an end.¹¹ In England the feudal order of the countryside and the corporate structure of the urban economy had been eroding for centuries. Agriculture had been commercialized, feudal bonds had been replaced by contractual relations, guilds had long ceased to exist; the advance of capitalism had perforated the divide between countryside and town, between rural and urban elites. Urban wealth was not barred from acquiring land. In contrast to most Continental nobles, English aristocrats could not hand down their title to all of their offspring, but only to the eldest son; female inheritance was possible in the absence of a male heir.

Although recent scholarship has warned against exaggerating the openness of the British elite, one still has to say that the English aristocracy and gentry were notoriously open to middle-class marriages, ideas, and fortunes. In the course of the nineteenth century, this accessibility grew. The permeability of the upper class did not weaken its standing, power, and consistency; quite the contrary. In political, social, and economic respects, the English aristocracy succeeded in maintaining much of its extraordinary status right into the twentieth century. The line of separation between nobility and gentry on the one hand and upper-middle-class groups on the other was less sharply drawn in England than in most parts of the Continent. Some of this argument holds as well for Sweden, where the feudal distinction between lords and peasants, countryside and town had also been less clearly marked, although for other reasons.¹²

In France, the *ancien régime* had not barred the urban rich from acquiring land, either. In some French regions and towns, part of the aristocracy and upper-middle-class groups had already formed close alliances in the eighteenth century. The Revolution stripped the nobility of all its legal privileges, and those privileges were never restored. The legal distinction between town and countryside was also removed. Historians of France presently like to stress the limited impact of the Revolution on the distribution of wealth, the recruitment of elites, and the distribution of power. Even after the Great Revolution, aristocrats continued to play a strong role in government, both locally and in the country as a whole. Previously exaggerated notions concerning the alleged triumph of the bourgeoisie in the Great Revolution have begged for correction. But if we compare France with Europe east of the Rhine, it becomes clear that certain flexibilities of the old order as well as the revolutionary form of its end blurred the divide between the nobility and the upper middle classes quite early in both France and Italy as well as in the Netherlands, Belgium, and Switzerland (where the nobility had been very weak anyway).

The era of the Notables who governed France between Napoleon's demise and the early years of the Third Republic has been analyzed as a transitory stage between the old corporate order and a modern class society. Seen from farther east, the aspect to be stressed is neither the strong aristocratic component of this milieu, nor the undeniable importance it gave to the possession of land as a basis of influence and status, nor the traditional mechanisms through which it worked: family connections and local elite cultures. Nor were its more modern, plutocratic characteristics – voting rights based on, and steeply graded by, taxable wealth and income – exceptional. What is startling if we compare France with Central and Eastern Europe is the close proximity and interconnection between aristocratic and bourgeois elements in this elite of Notables. Certainly, the distinction between aristocratic and middle-class cultures had not yet fully evaporated. But in France, as in Italy and Britain – though each case was different in other respects – there was a tendency toward mixing aristocratic and middle-class elements. Particularly in France, this *mélange* permitted a gradual, relatively smooth decline of the aristocratic component and a similarly gradual ascent of the middle class, which by 1914 had become the dominant partner in the alliance.¹³

Some regions in Germany resembled the Western European pattern – for example, the Rhineland, Hesse-Cassel, parts of Saxony, or independent cities like Hamburg, which saw an early decline of noble influence. But by and large the old order had been more rigid east of the Rhine and particularly east of the Elbe – less commercialized (or commercialized in a different form), with clearly marked legal, political, and cultural differences between lords and peasants, towns and countrysides, burghers and other city dwellers, between the middle class and other social groups. Here the *ancien régime* had largely barred rich urbanites from acquiring land. In Central and Eastern Europe, the legal foundations of the old feudal-corporate order were not removed by one revolutionary act but by a protracted process that started in the late eighteenth century and lasted throughout most of the nineteenth.

Of course, the differences between Central and Eastern Europe were deep and manifold. In Prussia and Bavaria, Austria and Bohemia, Galicia and Russia, land reform, individualization of property rights, and the introduction of modern political institutions occurred at different times and with very different results. But in Prussia, Austria, and Russia, the nobility (or part of it) retained remnants of a special legal status and other privileges until the end of the First World War, quite in contrast to Western Europe. There was, it is true, some rapprochement, some working together, even some limited fusion, between parts of the aristocracy and parts of the upper middle class in Central and Eastern Europe. This mingling is demonstrated by middle-class purchases of

formerly aristocratic landed estates, by bourgeois-aristocratic cooperation at the upper levels of the growing state bureaucracies, by the bourgeois inflow in the previously aristocratic officer corps, and by the imitation of aristocratic lifestyles by rich upper-middle-class families toward the end of the century. Small minorities of middle-class persons were ennobled – more frequently in Austria and Russia than in Prussia. Some aristocratic-bourgeois intermarriage took place. But by and large the dividing line between nobility and middle class remained more clearly marked in Central and Eastern Europe than in the West, right into the twentieth century, to the disadvantage of the middle classes. In Germany and Austria the middle classes grasped a smaller share of political power and achieved less social and cultural dominance than in the West. In Russia they remained even weaker.¹⁴

Another way of understanding international differences in the history of the European middle classes is to probe into their composition, particularly into the relationship between *Wirtschaftsbürgertum* and *Bildungsbürgertum*.

In the economically advanced countries of the West, merchants, bankers, and rentiers, and later manufacturing entrepreneurs and industrial managers as well, constituted the bulk and the core of the middle class from the mid-eighteenth century to the mid-twentieth. A high degree of intergenerational continuity was typical for these propertied groups; they were well rooted in their regions and influential in their communities. Of course there were lawyers and clergy, doctors and officials, university professors, and teachers at public schools and lycées as well. Their numbers and importance grew, particularly in the latter part of the nineteenth century. But relative to the scope and wealth, status and influence of the economic middle class, they were clearly subordinate, particularly in the earlier part of the century.

In England, observers like John Stuart Mill in the 1830s and Karl Marx a bit later virtually ignored the *Bildungsbürgertum* or saw it as a mere adjunct to the capitalist entrepreneurial class. Historians, particularly those in the Marxist tradition, frequently have followed their lead. British historian Harold Perkin wrote about the “forgotten middle class” when he rediscovered the professional milieus and distinguished them, as part of the emerging middle class of the 1820s, from the entrepreneurs and businessmen.

In France the *Bildungsbürgertum* was less marginal, but the professional element among the Notables was relatively weak. For the *notaires* and other officeholders, real estate and local connections were more important than the legal training that some of them had.

In both Great Britain and France it was only in the second half of the nineteenth century that the balance started to shift. Now the secondary

school system expanded, and formal education became more important for middle-class sons – and eventually daughters – as a common experience and a marker to separate them from the masses. Universities and professional schools also expanded, though more slowly. Professional careers became more common and more respected. Besides wealth and family background, talent and qualifications played an increasing (though still secondary) role in granting access to the middle class. Additional opportunities opened up for sons and daughters of some lower-middle-class families, but by and large the expensive and not very numerous schools served young men and women who already had middle-class backgrounds.¹⁵

This Western European pattern was not altogether absent in Central Europe. Where towns and regions looked back on an old tradition of industrial or mercantile wealth and active self-government, the development followed similar lines – for example, in Mannheim, Karlsruhe, and Hamburg. But in most of Germany the trend was different. Commercial and entrepreneurial activities emerged on a more moderate scale; the factory system came later than in England, Belgium, and France. The Germans were less wealthy than their neighbors to the west, and the difference showed itself not only in the smaller fortunes and less impressive mansions of German aristocrats but in the more moderate lifestyle of the middle class.

At the same time, “reform from above” was a strong tradition in Prussia, Bavaria, Austria, and other Central European states. Absolutist rulers and their emerging bureaucracies had taken the lead in modernizing their societies for the sake of enhancing their own power. In this context, one has to understand the early emphasis on modernizing and expanding the state-run school systems in Prussia and other German states. Secondary schools based on Latin and classical studies (*Gymnasien*) and universities expanded remarkably; the latter were intended primarily to train young men for state service. The number of students grew in the first decades and again in the last quarter of the nineteenth century, in Germany much more than in France. The stress on education and qualification – instead of, or in addition to, property and family background helped make access to the middle class a bit easier for lower-middle-class persons, but it helped exclude the working classes and other parts of the lower strata. Upward mobility from the working class into the middle class usually extended over two or three generations, with the elementary school teacher being in an important intermediate position. Sliding down could be faster. General education (*Bildung*) and professional qualification were matters of high prestige and public esteem in Germany, and preparing young men for higher positions in the civil service gave them a close connection to the notion of power as well, particularly

since parliamentary institutions remained weak and the bureaucratic apparatus strong throughout the nineteenth century.

With university-trained civil servants at its core, the early-nineteenth-century German *Bildungsbürgertum* was small and influential. In terms of social recognition, power, and self-esteem, its members were ahead of most merchants, manufacturers, and businessmen, who usually enjoyed more income and wealth. Only in the latter part of the century, when industrialization dramatically increased the wealth, power, and public reputation of part of the business community, did the balance start to change. For the most part, the pattern was similar in the western parts of the Hapsburg monarchy. In Italy, too, the members of the *borghesia umanistica* were relatively numerous and influential. But here civil servants played a much smaller role; members of the liberal professions, particularly lawyers, a much larger one.¹⁶

In both Western and Central Europe, the *Wirtschaftsbürgertum* and *Bildungsbürgertum* were at least loosely connected, sharing elements of a common culture and joined by numerous contacts of different sorts, although they were divided by different experiences as well. In the course of the century, they came even closer together, as indicated by increasingly similar educational backgrounds, by more frequent intermarriages (at least in the German case), and by a common commitment to powerful ideologies like liberalism and nationalism.

By contrast, in most of east-central and Eastern Europe the lines of division between the various middle-class subgroups remained sharply drawn. The relative economic backwardness of most of these regions corresponded to the weakness of an indigenous entrepreneurial middle class. When opportunities arose, foreign capital moved into this gap, and so did foreign – or ethnically different – entrepreneurs, particularly Germans and Jews, Greeks, and Armenians. The Poles, the Czechs, the Slovaks, and the peoples of the Balkans were ruled by supranational empires and governed by foreign elites. A *Bildungsbürgertum* of the Central European type could not easily develop. Rather, there was something like an indigenous *Bildungs-Kleinbürgertum* (as Jiří Kořalka has called it), an educated lower middle class, comprising elementary school teachers, Catholic clergy, perhaps some minor officials, and some intellectuals. They had little contact with the merchants and entrepreneurs or the elites (except, perhaps, with some indigenous aristocrats) but were near to the native population at large and played an important role in the rise of Eastern European nationalism. (This was true for intellectuals in Finland, Norway, and the Baltic countries as well.) In ethnically heterogeneous east-central Europe, with increasing tensions between the different nationalities and a common culture virtually lacking, the emergence of an integrated middle class was blocked.¹⁷

This was even more true for Russia. It is true, there were prosperous, privileged, and well-organized merchants, particularly in the large cities like Moscow and St. Petersburg. Their numbers grew, their status increased, and their educational background improved in the decades before the Bolshevik Revolution. There was mobility in and out of this group. But they were set clearly apart, not only from the artisans, tradespeople, and other petty-bourgeois categories below them but also from the intelligentsia (minor officials, clergy, teachers, professionals, writers, journalists). In contrast to the Central European *Bildungsbürgertum*, the Russian intelligentsia rarely included high-ranking academically trained government employees, who were mostly noble or on the way to ennoblement, frequently foreign-born, and sometimes despised by intellectuals. It may have been different with the emerging regional and local administrative elites, who were again mostly noble but with less distance to the intelligentsia. In general, members of the intelligentsia had closer contacts with intellectuals from the nobility than with members of the lower-status commercial and industrial groups, who were the objects of intellectual hostility. Even before 1917 the Russian situation differed from the Central and Western European pattern so dramatically that the author of a recent survey concludes: "The Russian middle class did not exist because its constituent elements were determined to avoid fusion and identification."¹⁸

To sum up: European middle classes differed in many ways. From a bird's-eye view, one can perhaps distinguish three constellations. In the West, propertied groups dominated the middle class. While the boundary between aristocratic and bourgeois elites was not sharply drawn and became increasingly blurred, middle-class wealth, privilege, and influence were strong and, of course, growing. In Central Europe, the educated middle class played a stronger role. The distinction between the aristocracy and the middle class remained more clearly defined. But middle-class influence was limited. Farther east, the middle class remained even weaker. The dividing line between aristocracy and middle class was clearly drawn, and the middle class remained highly fragmented. At the eastern and southeastern margins of Europe, a coherent middle class hardly existed.

Phases

What were the major tendencies in the development of the European middle classes? In a process so complex and heterogeneous, one cannot expect precise turning points. Developments differed from country to country and from region to region, not only in structure but in timing.

Any proposal for periodization is necessarily arbitrary. However, we may distinguish four main periods in the history of the European middle classes: the second half of the eighteenth century; the years from 1800 to 1850; the period from the mid-nineteenth century to the First World War; and the period since.

The Eighteenth Century

One cannot identify a neat beginning for the middle class. In seeking its origins, there are three overlapping social groups to consider. First, there were the burghers of early modern towns. In most of Europe (but not in the east), the towns were islands in a sea of feudalism, enjoying legal privileges with respect to commerce and trade, self-government, and the civil liberties of their inhabitants. In the towns, usually only a minority enjoyed full civil rights (*Bürgerrecht*), including the right to own property, to trade, to marry and set up a household, and to participate in corporations, guilds, and associations as well as in governing the town. Most merchants, tradespeople, and master artisans belonged to this legally privileged group, as did urban landowners, rentiers, officials, and persons with specific skills and professions; most of them were heads of families, usually male. The mass of the other town dwellers – servants, journey-workers, laborers, and members of dishonorable occupations, as well as dependent household and family members, including most women – did not enjoy full civil rights and did not qualify as burghers in the full sense. It was among the burghers of the European towns that an early bourgeois culture developed. Norms and ways of life centered around work, property, and respectability, thrift and order, religion, and participation in the handling of common affairs. Where the tradition of strong, self-governed burgher towns was absent in the late medieval and early modern periods, an important condition for the rise of a middle class was lacking.

Second, there were the agents of capitalism, the wholesale merchants with interregional and international ties, the capitalists and the bankers, and the owners and managers of putting-out systems, manufactories, and mines. They were usually part of the burgher communities. At the same time, their supralocal scope of action, their postcorporate type of business, their competitiveness, and their wealth set them apart from the traditional corporate economy of the towns, regulated by guilds, customs, and morals. Indeed, particularly in Central and even more in Eastern Europe, they frequently enjoyed special privileges granted to them by the government, which exempted them from the rules of their hometown and set them apart from the community of traditional burghers.

Third, there were those who served the rulers and governments, the princes, bishops, and lords, the numerous authorities of the time: qualified servants and educated officials, administrators and legal experts,

and – with some degree of autonomy – professors and clerics. Many of them came from universities. It was among these groups that the ideas of the Enlightenment found the most support, which, in turn, strongly influenced the emerging middle-class culture. These early *Bildungsbürger* usually lived in the towns, particularly in *Residenzstädte* towns and administrative centers. They had close contacts with burghers, but their status was different: it was based on their relation to the ruler and, increasingly, on education, academic training, and expertise. Many of them came into close contact with the traditional elites, with landowners and the nobility. Many acquired land, where this was permitted; a minority were ennobled.¹⁹

The European tradition of self-governed towns, the rise of capitalism, and the impact of state formation were the decisive factors. The urban burgher communities, the expanding business groups, and the growing educated circles inside and outside of public bureaucracies certainly differed a lot. But usually they were not noble; nor were they lower-class. They were closely related, they partly overlapped, and they developed elements of a common culture. Where and when this happened to more than a minimal extent, the modern middle class emerged, mostly in the second half of the eighteenth century.

1800-1850

In England and Switzerland, feudal structures had broken down much earlier. In the north they had hardly existed. In Russia and other parts of the east, the feudal dissolution would happen much later, after the Crimean War. But in most of Europe the old order was largely brought to an end between the late-eighteenth century and mid-nineteenth, either by revolution, as in France, or by gradual, protracted reforms – and revolution – as in most parts of Germany. The legal distinctions between town and countryside and between privileged burghers and other city dwellers were gradually removed. Land became a marketable property. Guild regulations were weakened or abandoned. The legal foundations were laid for an unrestricted market economy. Capitalism was on the rise in commerce, industry, and agriculture. Later, industrialization started and the factory system began to break through in England and in parts of the Continent. What was left of the old corporate order was now dissolved or at least severely weakened. Institutional developments differed, but nearly everywhere there was a trend toward more centralization and intensification of government power, toward some control of autocratic rule by bureaucracies or parliamentary institutions, toward constitutional government and due process of law. State-building had started much earlier; now it advanced quickly. These

fundamental changes were brought about largely by middle-class actors, and they had far-reaching consequences for the middle-class world.

There had been close alliances between nobles and upper-middle-class persons in the eighteenth century; the French Notables and the London mixture of aristocratic landowners and officeholders, wealthy merchants, and old professions are two examples. But everywhere the noble element had been dominant. Now the balance changed. The middle-class element gained because wealth became more important than title, and a move toward more meritocratic criteria took place. This redistribution of power within bourgeois-aristocratic alliances did not happen without tensions and conflicts, as in 1789, 1830, and 1848, but it produced only gradual change.

The eighteenth-century *Wirtschaftsbürgertum* had been relatively small. It was dominated by merchants, bankers, and rentiers and either functioned as a junior partner of the dominant landed elites or remained politically weak and socially marginal. Now this category grew in numbers, wealth, and importance. In the west the rise of the manufacturers began to change the composition of the economic middle class and contribute to its increasing demands and claims. It was in the rising manufacturing towns (for example, of northern England, northern France, and the Rhineland) that a new type of self-conscious and radical middle-class culture emerged, stressing work and thrift, independence and self-help. It opposed the power of the capital cities and their elites, worked against the old order with its aristocratic and autocratic traits, and sometimes, in the name of minority religions, attacked the established church and its orthodoxy.²⁰

Particularly (though not exclusively) in Central Europe, public bureaucracies gained strength, cohesion, and *esprit de corps*. Schools were reformed and expanded. Universities became a major avenue of access into the middle class. Civil servants and professionals developed new claims and demands on the basis of their education and training. They stressed meritocratic criteria of success and the idea of professional independence for a rising, modernizing elite.²¹

In other words, both the economic middle class and the educated middle class were developing new strength and a new profile. But in the early nineteenth century both remained mostly embedded in the urban burgher communities, which in Central and east-central Europe still retained some legal identity and much social and cultural cohesion vis-à-vis the urban lower strata and the neighboring countryside. The middle class proper had not yet loosed its ties to the large numbers of artisans, tradespeople, retailers, and minor officials.

Membership in voluntary associations held these middle-class groups together on the basis of an emerging common culture that centered on

family and work, ideas of progress, a strict moral code, education, and sometimes religion. This culture implied a postaristocratic modern vision of life, frequently advocated with outright criticism of the old order and the aristocracy. Out of this culture grew the programs of liberalism, which were translated into different demands and campaigns in local, regional, and national politics. There were, certainly, nonliberal middle-class persons and nonbourgeois liberals; but a basic affinity between middle-class culture and liberalism is beyond doubt in the first half of the nineteenth century. This middle class was on the rise, and its main challenge was directed against what had survived of the old order of privilege and autocracy.²²

1850 to the First World War

Between the mid-nineteenth century and the First World War, some of those trends continued. Industrialization reached full speed in large parts of Europe. Urbanization accelerated. Nation-states were formed in Germany and Italy, as demanded by liberals. The expansion of public bureaucracies continued, the education system grew, and after the 1880s government interventions in the economy and social relations increased further.

The Wirtschaftsbürgertum continued to grow in numbers, wealth, and importance, now with the industrialists at its core. The rise of the manager began. More and more businesspeople had attended secondary schools and universities. The Bildungsbürgertum also expanded and differentiated internally. Self-recruitment ratios declined and professionalization quickly advanced. Even in Germany, self-employed professionals and those employed by private organizations started to outnumber those in public employment. Doctors and lawyers made up the largest subgroups, which grew quickly as a consequence of advancing medicalization, growing juridification, and the beginning of the welfare state.

In wealth, cultural influence, and political power, the middle class had clearly outstripped the nobility in large parts of Europe by 1914. Although this claim must be qualified with respect to the distribution of political power in Germany, Central Europe, and the east, it is safe to say that the last two decades before the First World War saw the middle class at its peak. It remained a small minority everywhere, but its members and institutions, its spirit and culture prevailed in many social spaces, in the economy and in education, in the sciences and the arts, in the cities, at work, and in family life. It clearly would be wrong to speak of a decline of the middle class before 1914.²³ At the same time, however, the middle class became more defensive and more beleaguered. It lost some of its previous energy and much of its inner cohesion.

Long before 1848-49, there had been challenges to the middle class from below. The radicalization of the French Revolution in the 1790s, the elements of class warfare in Britain in the aftermath of the Napoleonic Wars, the uprisings and strikes of French craftspeople and workers in Paris and Lyon in the 1830s and 1840s, the revolt of the Silesian weavers in 1844, the demand for radical reform and even some socialist stirrings in the decade that has been labeled the “hungry forties” or the *Vormärz* (that is, the period before the 1848 Revolution) – these developments did not go unnoticed in middle-class circles. The unrest helped remind those in the middle class that there was a whole world below them which they could hardly influence, which was potentially dangerous, and against which it was prudent to protect oneself, even if one had to give up some progressive ideas and accept a closer alliance with parts of the old elites.

Although the social border between the middle class and those below was not new, it gained full relevance, prominence, and power in the second part of the century. The experience of the revolution of 1848-49 was decisive, with its masses emancipating themselves from middle-class leadership and challenging the middle-class world.

The stepwise democratization of voting rights for males – as a consequence of the events of 1848-49 in France, of 1867-71 in the emerging German nation-state, of the 1880s in Italy, and more gradually in Britain and other parts of Europe – brought “ordinary people” into the political arena more than ever before. The structure of politics changed from a system of Notables to mass and class politics.

The strength of independent labor movements indicated the rise of the working class as a dynamic factor and increased widespread middle-class anxieties. The Paris Commune of 1871 was a signal that registered all over Europe. In different forms and degrees, partly disguised, class tensions and conflicts permeated social relations, domestic politics, and culture in most of Europe in the late nineteenth century and early twentieth, much more than they had a hundred years earlier. Large parts of the middle classes turned to face a new adversary. The offensive challenge to the old elites had been central to middle-class culture and politics, but now a defensive self-distancing from those below became paramount.

Middle-class circles had to make explicit what had gone without saying before: that they did not belong to the ordinary people. The split between the circles of property and education and “the people” grew. The rest of the corporate basis of the burgher communities was breaking down while the differentiation between the upper and lower parts of the middle classes advanced. A gap widened between, on one hand, merchants, industrialists, professors, and higher civil servants and, on the other, artisans, retailers, innkeepers, minor officials, and employees.

Only in the second part of the century did the *petite bourgeoisie* establish its profile as a separate entity, while the concept of "middle class" was narrowing down to the better-off circles of property and education.²⁴

At the upper margin of the middle class, the constellation was changing as well. Recent research has relativized the notion of "feudalization" of the late-nineteenth-century upper middle class, and for good reason. To acquire land and to live for part of the year in a mansion outside the city, to consume conspicuously and enjoy hunting and cricket, to mix socially with aristocrats, and not only during the London or Berlin "season," to think about marrying one's daughter into an aristocratic family – all this did not really make a noble out of a wealthy bourgeois.

It was possible to adopt elements of an aristocratic lifestyle without leaving or neglecting one's business, and many did so. Liberalism was never a strictly defining characteristic of middle-class culture, and consequently the move to the conservative right by many well-to-do businesspeople, high civil servants, and professionals since the late nineteenth century cannot be seen as a betrayal of their middle-class origins. Formal ennoblement remained rare. Most of the sons of well-established businesspeople seem to have stayed in the business world, and aristocratic families continued to favor endogenous marriage strategies and to maintain their disdain for industrial and commercial pursuits.

After all this is said, however, one should reaffirm the kernel of truth in the feudalization thesis. In contrast to 1800, large middle-class fortunes in 1900 matched and even exceeded aristocratic wealth. An upper stratum of the middle class came very close to the aristocracy in lifestyle and culture. Inter-marriage and other forms of mixing between bourgeois and aristocratic circles reached an unprecedented high in Edwardian England and Wilhelmine Germany, and in prerevolutionary Saint Petersburg, too. In politics the showdowns between landed and business interests, between mostly conservative nobles and the largely liberal middle classes, were definitely over. Large parts of the nobility had accepted the modern world and adopted central elements of middle-class culture, and a large part of the middle classes moved to the right. Confronted with challenges from below, those on the top cared more for their common interests and common experiences than for what continued to separate them. Something like a composite elite emerged, which tended to bridge the old aristocratic–middle-class divide, particularly in Western Europe.²⁵

For the middle class, this meant further internal differentiation. Its upper stratum was withdrawing. One of the two social fronts that had helped to define middle-class identity, partly evaporated. The previous affinity between middle-class culture and liberalism eroded; middle-class progressivism became a minority phenomenon. Nationalism continued

to be strong, but increasingly it had illiberal, imperialist, and sometimes racist connotations. Intellectual insecurity grew. Against this background, harsh criticism and outright rejection of the middle-class world could spread widely, directed against its philistine and hypocritical aspects, its conventionalism and rigidities, its all too "rational" vision of life. Antibourgeois criticisms were most powerfully brought forward by the socialist labor movements. They were frequently propagated by middle-class persons themselves, by intellectuals, artists, and avant-garde writers, but also by the largely middle-class youth movements of the turn of the century. There were numerous clubs and associations in which antibourgeois *Kulturkritik* ran high; usually their members were middle class. At the fin de siècle and before the First World War, the middle-class world was not only attacked from below but questioned from within.²⁶

Since the First World War

The history of the middle classes since the First World War has been a tale of victory and diffusion. In a way, the middle class has disappeared, along with its two main opponents, while its culture has changed and spread.

The divide between the aristocracy and the rest of society has faded away. In the twentieth century, the nobility of Europe lost all legal privileges and most social particularities. In Eastern Europe the aristocracy was destroyed and expelled by communist dictatorships. In Central Europe it did not escape the damaging effects of fascism and war. In most of the Continent the victories of capitalism and democracy eroded what had been left of aristocratic entitlements and distinctions. Some of them may still exist, particularly in England, but for the most part it is no longer meaningful to distinguish between aristocracy and the middle class at the top of the social pyramid. Consequently, historians of recent decades and students of present societies prefer to speak of composite elites, of the *Oberschicht* or *classes supérieures*.²⁷

The second social boundary that helped to define the middle class in the nineteenth century has survived much longer. Throughout most of the twentieth century the divide marked by tensions and conflicts between the middle and working classes has strongly influenced social relations and domestic politics. Even now this class line has not disappeared in any Western European society, and it is about to reappear in the east, where it had been eroded, suppressed, and supplanted by other forms of inequality. Still, the composition of the working population has fundamentally changed as a result of the stagnation and decline of the blue-collar sector, the dramatic expansion of the white-collar working force, and deep changes in the sphere of work. Workers' lives changed drastically following democratization, the rise of the welfare state, and

the unprecedented growth of mass purchasing power since the 1950s. The integration of the labor movements advanced. The dictatorships and wars of the twentieth century, and the massive destruction and compulsory population transfers that accompanied them, have contributed to the erosion of traditional working-class cultures in most of Europe; but the dramatic improvement of postwar living standards and the rise of a consumer society have been even more influential in accelerating working-class devolution.

The patterns of social and cultural inequality have become more amorphous in recent years. Certainly, labor movements have not disappeared; in fact, their threat to the middle-class world increased after the First World War, as communism first became a domestic challenge and later – moving beyond its original working-class base – a fundamental international challenge. But within Western societies of the post-Second World War era, the labor movements have lost part of their power and nearly all of their radical thrust. Finally, the communist threat has ended in the international arena too.

All these are complicated stories, not to be told here. Suffice it to say that the fundamental challenge from below, which was so closely tied to the rise of the working classes and socialist labor movements and which had helped to constitute and define the middle classes of nineteenth- and early twentieth-century Europe, has not survived. There are new cleavages, such as that between the majority and the new underclasses of immigrants, the unemployed, and marginal minorities in most Western countries. Social inequality as a whole has not decreased. There are new conflicts, for instance, over ecological issues. But all this does not function as it did when the proletarian-socialist challenge enticed the middle class to affirm its boundaries and stick together in the nineteenth and early twentieth centuries.²⁸

The middle class proved to be stronger than its opponents. It won. Its culture and its principles have spread widely to all parts of the classes supérieures and, to a certain extent, to the shrinking rural population, to the middle masses that used to be called “lower middle class,” and even to parts of the working class. There continue to be limits to the spread of middle-class culture, and there continue to be differences everywhere; even Western societies have not become thoroughly “bourgeois.” But middle-class culture, which has a built-in tendency toward universalization, has moved far beyond the social segment where it originated and that it once helped to define. In this victory the middle class lost much of its identity.

There have been many internal changes as well, however. The salaried segment of the middle class has outnumbered its self-employed part. Consequently the definition of middle-class “independence” has had to

change. Bureaucratization has left its stamp. The number of rentiers has gone down dramatically (except in old age); this decline can be seen as a gain for middle-class principles stressing work and achievement.

Other elements of nineteenth-century middle-class culture have been lost in twentieth-century catastrophes and modernization. Ever since the First World War, the number of servants in middle-class households has declined steadily; servants had been of the utmost importance for nineteenth-century middle-class families. Classical education became marginal as it gave way to more specialized forms of training, and this change dissolved an important bracket that had kept the middle class together. The culture of work and thrift, of progress and order, of religion and self-righteousness that defined large parts of the rising middle classes in the earlier parts of the nineteenth century is largely gone. The most central institution of middle-class culture, the family, has changed tremendously, because a clear separation of gender roles had been essential to it. Gender relations have changed thoroughly. Other influences had an effect as well: for example, the changing status of youth, the rise of the media, and the multiplication of choices available in modern society. As a result, the family has lost many of its nineteenth-century functions and part of its inner cohesion, with disintegrative effects on middle-class culture.²⁹

It is worthwhile to remember that most of these changes originated in the middle-class world, however. This is certainly true with respect to the movements for women's equality, which got off the ground by taking certain middle-class promises – individual rights, education, work and achievement, active participation in public life – seriously enough to demand their extension to women, to whom they had been largely denied during the first hundred years of modern middle-class history. To incorporate “the other half” into middle-class culture on a more equal basis, the culture itself had to change. The same holds true with respect to attempts to incorporate other classes and other parts of the world into middle-class culture. These processes are still under way, and it is not at all clear how far they will get.

This essay has dealt with the middle class in the sense of a small but coherent and highly influential social formation defined by common opponents and a shared culture. The degree to which it existed has varied over time and space. It emerged in the eighteenth century and declined in the twentieth. It was more clearly established in the west and in the center of the Continent than in the east. Its existence depended on certain historical constellations, among them the tradition of Enlightenment and a specific separation between countryside and town. It seems that these were constellations specific to Europe. It is not very likely that they will be found in many other parts of the world.

Notes

1. D. Blackbourn and R.J. Evans, eds., *The German Bourgeoisie: Essays on the Social History of the German Middle Class from the Late Eighteenth to the Early Twentieth Century* (London, 1991); V. Bácskai, ed., *Bürgertum und bürgerliche Entwicklung in Mittel- und Osteuropa*, 2 vols. (Budapest, 1986); E. Bruckmüller et al., eds., *Bürgertum in der Habsburgermonarchie*, 2 vols. (Vienna, 1990, 1992); R. Romanelli, "Political Debate, Social History, and the Italian 'Borghesia': Changing Perspectives in Historical Research," *Journal of Modern History* 63 (1991): 717-39.
2. P.M. Pilbeam, *The Middle Classes in Europe, 1789-1914: France, Germany, Italy and Russia* (London, 1990), p. 1.
3. P. Gay, *The Bourgeois Experience: Victoria to Freud*, vol. 1, *Education of the Senses* (Oxford, 1984), pp. 18-24; J. Kocka, "The European Pattern and the German Case," in *Bourgeois Society in Nineteenth-Century Europe*, ed. J. Kocka and A. Mitchell (Oxford, 1993), pp. 3-4, 8-15.
4. G. Crossick and H.-G. Haupt, eds., *Shopkeepers and Master-Artisans in Nineteenth-Century Europe* (London, 1984); J. Kocka, *Les employés en Allemagne, 1850-1980: Histoire d'un groupe sociale* (Paris, 1989).
5. Kocka, "The European Pattern," p. 4; R. Price, *A Social History of Nineteenth-Century France* (London, 1987), p. 122; Gay, *The Bourgeois Experience*, p. 23.
6. That means neglecting, for the purpose of this essay, some undeniable differences in the use and connotations of these two words. "Middle class" is usually broader than "bourgeoisie" in that it reaches further down into the "petite bourgeoisie" and more narrow in that it may exclude parts of the elites. "Bourgeoisie" and "bourgeois" lend themselves more to critical, political, and polemical usage than the more neutral "middle class." See R. Koselleck, U. Spree, and W. Steinmetz, "Drei bürgerliche Welten? Zur vergleichenden Semantik der bürgerlichen Gesellschaft in Deutschland, England, und Frankreich," in *Bürger in der Gesellschaft der Neuzeit*, ed. H.J. Puhle (Göttingen, 1991), pp. 14-58; W. Steinmetz, "Gemeineuropäische Tradition und nationale Besonderheiten im Begriff der 'Mittelklasse': Ein Vergleich zwischen Deutschland, Frankreich und England," in *Bürgerschaft: Rezeption und Innovation der Begrifflichkeit vom hohen Mittelalter bis ins 19. Jahrhundert*, ed. R. Koselleck and K. Schreiner (Stuttgart, 1994), pp. 161-236; U. Spree, "Die verhinderte 'Bürgerin'? Ein begriffsgeschichtlicher Vergleich zwischen Deutschland, Frankreich und Großbritannien," in *Bürgerschaft*, ed. Koselleck and Schreiner, pp. 274-306.
7. Tracing the changing meaning, usage, and counterconcepts of "middle class" is one way of documenting these structural changes. Compare detailed evidence in J. Kocka, "Bürgertum und bürgerliche Gesellschaft im 19. Jahrhundert: Europäische Entwicklungen und deutsche Eigenarten," in *Bürgertum im 19. Jahrhundert: Deutschland im europäischen Vergleich*, ed. J. Kocka and U. Frevert, 3 vols. (Munich, 1988), vol. 1, pp. 20-24.
8. L. Davidoff and C. Hall, *Family Fortunes: Men and Women of the English Middle Classes, 1780-1850* (Chicago, 1987), pp. 18-28; M.A. Kaplan, *The Making of the Jewish Middle Class: Women, Family, and Identity in Imperial Germany* (Oxford, 1991); B.G. Smith, *Ladies of the Leisure Class: The Bourgeoisie of Northern France in the Nineteenth Century* (Princeton, 1981); G.-F. Budde, *Auf dem Weg ins Bürgerleben: Kindheit und Erziehung in deutschen und englischen Bürgerfamilien, 1840-1914* (Göttingen, 1994).
9. On Austria: U. Döcker, *Die Ordnung der bürgerlichen Welt: Verhaltensideale und soziale Praktiken im 19. Jahrhundert* (Frankfurt, 1994); on Sweden: J. Frykman and O. Löfgren, *Culture Builders: A Historical Anthropology of Middle-Class Life* (New Brunswick, NJ, 1987).

10. T. Zeldin, *France, 1848-1945* (Oxford, 1973), vol. 1, p. 22. According to our definition, "middle class" is not just a category but also a social formation or group whose members share situational characteristics, a sense of belonging together, common attitudes and values, as well as a disposition for common behavior.
11. J. Blum, ed., *The End of the Old Order in Rural Europe* (Princeton, 1978). A similar book on the end of the old corporate order in the towns has yet to be written. W. Mosse, "Nobility and Middle Classes in 19th-Century Europe: A Comparative Study," in *Bourgeois Society*, ed. Kocka and Mitchell, pp. 70-102.
12. E. Hobsbawm, "The Example of the English Middle Class," in *Bourgeois Society*, ed. Kocka and Mitchell, pp. 127-50; B. Stråth, "Die bürgerliche Gesellschaft in Schweden," in *Bürgertum im 19. Jahrhundert*, ed. Kocka and Frevert, vol. 1, pp. 224-46.
13. A. Daumard, *Les bourgeois et la bourgeoisie en France depuis 1815* (Paris, 1987); G. Chaussinand-Nogaret et al., eds., *Histoire des élites en France du XVIe au XXe siècle: L'honneur, le mérite, l'argent* (Paris, 1991); A.M. Banti, *Terra e denaro: Una borghesia padana dell'Ottocento* (Venice, 1989); A. Tanner, "Bürgertum und Bürgerlichkeit in der Schweiz: Die 'Mittelklassen' an der Macht," in *Bürgertum im 19. Jahrhundert*, ed. Kocka and Frevert, vol. 1, pp. 193-223.
14. Compare the summary articles on Austria and Poland by E. Bruckmüller and H. Stekl and by W. Długoborski in *Bürgertum im 19. Jahrhundert*, ed. Kocka and Frevert, vol. 1, pp. 160-92, 266-99. On Russia: B.R. Brower, *The Russian City between Tradition and Modernity, 1850-1900* (Berkeley, 1990); A.J. Rieber, *Merchants and Entrepreneurs in Imperial Russia* (Chapel Hill, NC, 1982).
15. H. Perkin, *The Origins of Modern English Society, 1780-1880* (London, 1969), pp. 252ff.; H. Berghoff and R. Möller, "Tired Pioneers and Dynamic Newcomers? A Comparative Essay on English and German Entrepreneurial History, 1870-1914," *Economic History Review* 47, no. 2 (1994): 262-87; R. Torstendahl and M. Burrage, eds., *The Formation of Professions: Knowledge, State and Strategy* (London, 1990); K. Offen, "The Second Sex and the Baccalauréat in Republican France, 1880-1924," *French Historical Studies* 13 (1983): 252-86.
16. H.-U. Wehler, "Deutsches Bildungsbürgertum in vergleichender Perspektive: Elemente eines 'Sonderwegs'?" in *Bildungsbürgertum im 19. Jahrhundert, IV: Politischer Einfluß und gesellschaftliche Formation*, ed. J. Kocka (Stuttgart, 1989), pp. 215-37. The southwest German middle class was less influenced by civil servants and professionals. See L. Gall, *Bürgertum in Deutschland* (Berlin, 1989); H. Kaelble, *Social Mobility in the 19th and 20th Centuries: Europe and America in Comparative Perspective* (Leamington Spa, 1985); K. Tenfelde, "Unternehmer in Deutschland und Österreich während des 19. Jahrhunderts," in *Innere Staatsbildung und gesellschaftliche Modernisierung in Österreich und Deutschland 1867/71-1914*, ed. H. Rumpel (Munich, 1991), pp. 125-38; H. Siegrist, *Advokat, Bürger und Staat: Eine vergleichende Geschichte der Rechtsanwälte in Deutschland, Italien und der Schweiz (18.-20. Jahrhundert)* (Frankfurt, 1995); F.K. Ringer, *Education and Society in Modern Europe, 1815-1960* (Bloomington, IN, 1979).
17. W. Długoborski, "Das polnische Bürgertum vor 1918 in vergleichender Perspektive," in *Bürgertum im 19. Jahrhundert*, ed. Kocka and Frevert, vol. 1, pp. 266-99; M. Hroch, "Das Bürgertum in den nationalen Bewegungen des 19. Jahrhunderts," in *Bürgertum im 19. Jahrhundert*, ed. Kocka and Frevert, vol. 3, pp. 337-59; and E. Kaczynska, "Bürgertum und städtische Eliten: Kongreßpolen, Rußland und Deutschland im Vergleich," in *Bürgertum im 19. Jahrhundert*, ed. Kocka and Frevert, vol. 3, pp. 466-88; G. Ránki, "The Development of the Hungarian Middle Classes: Some East-West Comparisons," in *Bourgeois Society*, ed. Kocka and Mitchell, pp. 439-55.
18. Pilbeam, *The Middle Classes*, pp. 22 (quote), 18ff., 68, 80, 135ff.
19. The literature abounds. A classical study is M. Walker, *German Hometowns: Community, State and General Estate, 1648-1871* (Ithaca, NY, 1971), on traditional

- burgher communities in Central Europe; Pilbeam, *The Middle Classes*, pp. 212-13 (referring to literature by R. Forster, L. Bergeron, J. Tulard, et al.), on eighteenth-century notables; W.D. Rubinstein, "The End of 'Old Corruption' in Britain, 1780-1860," *Past and Present* 101 (1983): 55-86.
20. Perkin, *The Origins*, pp. 196ff.; C. Charle, *Histoire sociale de la France au XIXe siècle* (Paris, 1991), pp. 42-55, 181-228, 239ff. A recent case study on a small German region: S. Brakensiek, "Adlige und bürgerliche Amtsträger in Staat und Gesellschaft: Das Beispiel Hessen-Kassel, 1750-1866," in *Wege zur Geschichte des Bürgertums*, ed. K. Tenfelde and H.-U. Wehler (Göttingen, 1994), pp. 15-35. In general, English middle-class culture maintained closer relations to religion than middle-class cultures in Germany and France, where the stress was much more on secularized Bildung and laicist self-distancing from the church (with many exceptions, e.g., the pious Protestant businessmen of Barmen and the Catholics, particularly bourgeois women, of Northern France). The "Old Believers" formed a nonconformist religious minority and were strong in the Moscow middle class. See A. Gerschenkron, *Europe in the Russian Mirror: Four Lectures in Economic History* (Cambridge, 1970), p. 17ff. On Jewish entrepreneurs, see W.E. Mosse, *The German-Jewish Economic Elite, 1820-1935: A Socio-Cultural Profile* (Oxford, 1989). On the Catholic middle class in the western part of Germany, T. Mergel, *Zwischen Klasse und Konfession. Katholisches Bürgertum im Rheinland, 1794-1914* (Göttingen, 1994); and Smith, *Ladies of the Middle Class*, on France.
 21. See Pilbeam, *The Middle Classes*, chap. 5.
 22. R.J. Morris, *Class, Sect and Party: The Making of the British Middle Class, Leeds, 1820-1850* (Manchester, 1990); E. Francois, ed., *Geselligkeit, Vereinswesen und bürgerliche Gesellschaft in Frankreich, Deutschland und der Schweiz, 1750-1850* (Paris, 1986); J.J. Sheehan, *German History, 1770-1866* (Oxford, 1989), chap. 9; D. Langewiesche, "Liberalism and the Middle Classes in Europe," in *Bourgeois Society*, ed. Kocka and Mitchell, pp. 40-69; D. Langewiesche, ed., *Liberalismus im 19. Jahrhundert: Deutschland im europäischen Vergleich* (Göttingen, 1988).
 23. H.G. Haupt, *Sozialgeschichte Frankreichs seit 1789* (Frankfurt, 1989), pp. 232-60; H.-U. Wehler, *Deutsche Gesellschaftsgeschichte* (Munich, 1995), vol. 3, pp. 712-50, and "Wie bürgerlich war das Deutsche Kaiserreich?" in *Bürger und Bürgerlichkeit im 19. Jahrhundert*, ed. J. Kocka (Göttingen, 1987), pp. 243-80; F.M.L. Thompson, *The Rise of Respectable Society: A Social History of Victorian Britain, 1830-1900* (Cambridge, MA, 1988); D. Lieven, *The Aristocracy in Europe, 1815-1914* (London, 1992); Y. Cassis, "Businessmen and the Bourgeoisie in Western Europe," in *Bourgeois Society*, ed. Kocka and Mitchell, pp. 103-24; H. Kaelble, "French Bourgeoisie and German Bürgertum, 1870-1914," in *Bourgeois Society*, ed. Kocka and Mitchell, pp. 273-301; M. Hildermeier, "Sozialer Wandel im städtischen Rußland in der zweiten Hälfte des 19. Jahrhunderts," *Jahrbücher für Geschichte Osteuropas* 25 (1977): 525-66.
 24. E.J. Hobsbawm, *The Age of Capital, 1848-1875* (London, 1977), chaps. 12 and 13, and *The Age of Empire, 1875-1914* (New York, 1987), chaps. 5 and 7; H.-U. Wehler, "Die Geburtsstunde des deutschen Kleinbürgertums," in *Bürger in der Gesellschaft*, ed. Puhle, pp. 199-209; G. Crossick, ed., *The Lower Middle Class in Britain, 1870-1914* (New York, 1977); J. Kocka, ed., *Arbeiter und Bürger im 19. Jahrhundert: Varianten ihres Verhältnisses im europäischen Vergleich* (Munich, 1986).
 25. D.L. Augustine, *Patricians and Parvenus: Wealth and High Society in Wilhelmine Germany* (Oxford, 1994); H. Kaelble and H. Spode, "Sozialstruktur und Lebensweisen deutscher Unternehmer, 1907-1927," *Scripta Mercaturae* 24 (1990): 132-78; H. Berghoff, "Aristokratisierung des Bürgertums? Zur Sozialgeschichte der Nobilitierung von Unternehmern in Preußen und Großbritannien 1870 bis 1918," *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 81 (1994): 178-204; the articles by F.M.L. Thompson and P. Thane on aristocracy and middle class in England

- in *Bürgertum, Adel und Monarchie: Wandel der Lebensformen im Zeitalter des bürgerlichen Nationalismus*, ed. A.M. Birke et al. (Munich, 1989), pp. 15-35, 93-108; T. Durandin, "Entre tradition et aventure," in *Histoire des élites*, Chaussinand-Nogaret et al., eds., pp. 319-451; A.J. Mayer, *The Persistence of the Old Regime: Europe to the Great War* (New York, 1981).
26. H. Mommsen, "Die Auflösung des Bürgertums seit dem späten 19. Jahrhundert," in Kocka, ed., *Bürger und Bürgerlichkeit*, pp. 288-315.
 27. Y. Cassis, "Financial Elites in Three European Centres: London, Paris, Berlin, 1880s-1930s," *Business History* 33 (1991): 53-71; H. Kaelble, "Die oberen Schichten in Frankreich und der Bundesrepublik seit 1945," in *Frankreich Jahrbuch 1991* (Opladen, 1991), pp. 63-78; H. Morsel, "La classe dominante de l'entre-deux-guerres à nos jours," in *Histoire des français XIXe-XXe siècle*, ed. Y. Lequin (Paris, 1983), vol. 2, p. 536ff.
 28. J. Mooser, *Arbeiterleben in Deutschland 1900-1970: Klassenlagen, Kultur und Politik* (Frankfurt, 1984); A.A. Jackson, *The Middle Classes, 1900-1950* (Nairn, 1991); A. Marwick, *Class: Image and Reality in Britain, France and the USA since 1930* (New York, 1980). Most recent and stimulating: H. Siegrist, "Ende der Bürgerlichkeit?" *Geschichte und Gesellschaft* 20 (1994): 549-93; K. Tenfelde, "Stadt und Bürgertum im 20. Jahrhundert," in *Wege zur Geschichte*, ed. Tenfelde and Wehler, pp. 317-53.
 29. L. Davidoff, "The Family in Britain," in *The Cambridge Social History of Britain*, ed. E.M.L. Thompson (Cambridge, 1990), vol. 2, pp. 98-129, in contrast to Budde, *Auf dem Weg*; K.H. Jarausch, *The Unfree Professions: German Lawyers, Teachers and Engineers, 1900-1950* (New York, 1990), in contrast to R. Koselleck, ed., *Bildungsbürgertum im 19. Jahrhundert, II: Bildungsgüter und Bildungswissen* (Stuttgart, 1990). C. Hall, *White, Male and Middle Class: Explorations in Feminism and History* (Cambridge, England, 1992); U. Frevert, ed., *Bürgerinnen und Bürger: Geschlechterverhältnisse im 19. Jahrhundert* (Göttingen, 1988).



The First World War and the “Mittelstand”

German Artisans and White-Collar Workers

If an attempt were made to analyze German society before 1914 in terms of a class structure whose primary criterion was the ownership and control of the means of production, it would be very difficult to place salaried employees, on the one hand, and artisans and small tradespeople on the other, within such a framework. In the writings of the day, these two groups – along with most peasants, civil servants, and professional people – frequently were lumped together as the “*Mittelstand*” (roughly, “lower middle classes”) to mark them off from those above and those below, from capital and wage labor, from the ruling classes and the proletariat. This essay deals with the socioeconomic characteristics, the ideologies, and the social alliances of these middle groups, with their wartime development and resulting changes.

According to the last prewar occupational census (1907), there were about 2 million salaried employees or white-collar workers (*Angestellte*) as compared with 13.7 million wage earners or manual workers (*Arbeiter*); that is, for every ten salaried employees there were approximately seventy wage earners. Most of the salaried employees (about 1.1 million) were employed in the service sector, which had in fact offered white-collar jobs (in very much smaller numbers, to be sure) long before industrialization, mainly for shop-assistants. About 700,000 worked as technicians, tradespeople, supervisors, and office personnel in manufacturing and mining; this group was largely a by-product of industrialization and had rapidly

increased with the bureaucratization and commercialization of the secondary sector, especially after 1890. The remainder worked in agriculture (100,000) and as employees of professional people (about 50,000), for example, in lawyers' offices and chemist shops. In 1907 31 percent of all salaried employees were women, 69 percent men. Approximately three-quarters were engaged in either commercial or general office work, approximately one-fourth as technical or supervisory personnel.¹

With respect to their activities, functions, education, income, legal rights and other characteristics, these groups had little in common except their class position: they did not own the means of production; they were not self-employed but employed by others. In these respects they were on the same footing as wage earners. But they differed from wage earners in at least one of the following respects: despite much overlapping, white-collar workers earned more than factory or blue-collar workers, on average, and were almost always paid salaries rather than wages; many of them had more personal contact with the "boss" or employer (especially in the commercial sector); they did not, or at least not exclusively, do manual labor; as a rule they enjoyed greater job security and special fringe benefits; their lifestyle, pattern of consumption, and career expectations were quite different from those of wage earners. They saw themselves not as members of the working class or proletarians but as shop assistants, as technicians, or as *Privatbeamte* (private officials) and were regarded as such by most people. Much more emphatically and clearly than the Anglo-Saxon concept of "white-collar employee" or the French "*employé salarié*," the concepts "Privatbeamter" and "Angestellter," although covering a widely varied range of jobs, characterized a distinct social stratum with privileges and rights, clearly set off from wage earners, on the one hand, and self-employed persons and employers, on the other.

The organizational and political behavior of salaried employees contrasted markedly with that of manual workers. Although by 1907 approximately every third Angestellter belonged to a white-collar association, the majority of them (thirty-two of fifty-three) also were open to the self-employed, thereby making it plain that they did not fall into the normal trade-union category. Some of these organizations functioned on a purely local level, while others either served specialized professional interests or primarily promoted social activities. Only a few – for example, the Bund der technisch-industriellen Beamten, with 23,000 members, the socialist Zentralverband der Handlungsgehilfen, with 18,000, and the Verband der Bureauangestellten Deutschlands, with 8,000 – recognized the strike as a means of furthering their interests. The powerful right wing of the organized white-collar workers, led by the nationalist and anti-Semitic Deutschnationaler Handlungs-

gehilfen-Verband, with 123,000 members, combined strong antisocialist and staunchly conservative resentment with a readiness for hard-headed pressure-group activities. The overwhelming majority of white-collar workers probably divided their votes fairly equally between the Liberals, the Conservatives, and the Catholic Center. Only a small minority voted Social Democrat.

Before 1914

In no other comparable industrialized country (with the exception of Austria) was the difference between manual workers and non-manual employees so marked and so real. The bureaucratic traditions of Prussian-German society served the rapidly growing, salaried middle strata, the *Privatbeamte*, as a model for their self-identification as a group, as a basis for their special claims, and as a means of marking themselves off from the workers. Confronted with a vehemently socialist labor movement, with an apparently revolutionary proletariat imperfectly integrated into bourgeois society, most white-collar workers stressed their ties with the bourgeoisie, with the nonproletarian anti-socialist camp. The more working conditions and wage levels between workers and employees converged as industrialization advanced, the more doggedly white-collar workers sought to maintain their traditional privileges. The more the socioeconomic differences between themselves and manual workers diminished, the more emphatically they stressed the ideological differences.

Since 1900 the majority of the white-collar associations had been agitating for a privileged position not accorded to the working class, within the system of social insurance legislation. In this connection it became customary to refer to them as the "new *Mittelstand*." Their anti-proletarian efforts to define their special position coincided with anti-socialist policies of the parliamentary majority and the government designed to prevent further expansion of the socialist camp. Beginning in 1911, laws were enacted granting white-collar workers special social-insurance benefits and special privileges in other areas of labor and social policy. Thus in Germany, in contrast to England and the United States, the dividing line between white-collar employees and blue-collar workers was reinforced by law although its socioeconomic basis was becoming more and more obsolete.²

It is difficult to assess the number of artisans and small tradespeople on the eve of the First World War: a very rough estimate would put them at about two million, approximately the same as the number of *Angestellte*. Like industrialists and other entrepreneurs, they were self-

employed owners of the means of production and often employers; but they differed from industrialists and entrepreneurs not only in lifestyle but in socioeconomic and political orientation. The artisans as a social group had their origin in the pre-industrial era and still leaned heavily on pre-industrial traditions. Since the first half of the nineteenth century, they had been fairly consistent in their demands, which were directed, sometimes openly, sometimes implicitly, against the competitive capitalist system, against the principles of free trade, and against big business, with its advantages of large-scale organization. They had gradually abandoned the liberal-democratic political demands which they had combined with backward-looking economic programs in 1848 and still in the 1860s. Since the depression of the 1870s, they had organized themselves in a large number of associations and interest groups. They often pleaded for the reintroduction of guild regulations that would put curbs on untrammelled competition – for example, compulsory guild membership (the guild having the power to fix prices) and requiring prospective artisans to acquire a qualifying certificate (*Befähigungsnachweis*) awarded on the basis of examinations administered by the craft organizations themselves. Priding themselves on being the stratum between the classes, the “stabilizing factor,” they demanded that the state should underwrite their economic and social status to protect them from the effects of advancing industrialization. In this they were partially successful. Some protective laws passed between 1897 and 1909, and artisans were given preferential consideration in the granting of state contracts.

To a certain extent, this attack on the competitive economy and big capital united the artisans with the originally liberal small independent tradespeople, who since the depression of the 1870s also had turned to the state for help. The small shopkeepers also opposed unrestricted competition, as conducted by modern big business organizations (especially the department stores), as well as “unfair competition” from peddlers and, increasingly, from consumer cooperatives. Besides the semipublic trade associations – *Handwerks- und Gewerbekammern*, on the one hand, and *Handelskammern*, on the other – which represented artisans and small tradespeople separately, voluntary associations had sprung up, especially after the 1890s, seeking to unite these two groups. They found a common ideology in “Mittelstand” ideas and slogans emphasizing their “reliability” against “subversion” (*Umsturz*), their importance for a “healthy” society, and their need for and claim to protection. In other respects, however, this Mittelstand movement remained unstable and heterogeneous. Its right wing, which found support especially in Saxony and Lower Saxony, and whose best-known organization was the Reichs-deutsche Mittelstandsverband, propagated an aggressively reactionary, anti-socialist, anti-Semitic, and nationalist ideology. Other groups, such

as the south German Gewerbevereine and the semipublic trade associations, pursued a policy based more closely on concrete interests and advocated moderate liberal-conservative policies.³

From the end of the century, the imprecision and positive emotional charge of the *Mittelstand* concept were used to link artisans and small shopkeepers with white-collar workers. This vague and ideological talk of the "old" and the "new" *Mittelstand* papered over the underlying tensions between salaried employees and small proprietors who, after all, belonged to different classes and had many conflicting interests. The widespread talk about *Mittelstand* and the resulting policies covered this up and served integrative functions within a society whose growing class conflicts otherwise would have demanded very different, less ideological solutions – solutions more costly for the ruling elites.

The anxious appeals for the protection of the *Mittelstand* were imprecise and emotional enough to enable the ruling groups to exploit them for their own interests. The Bund der Landwirte, representing big landowner interests, asserted that common interests existed between large-scale agriculture and the "*Mittelstand* in town and country." Major industrialists paid at least rhetorical respect to the *Mittelstand* in order to find popular support for their anti-socialist and antidemocratic tactics, which in 1913 found a loosely organized outlet in the Kartell der schaffenden Stände (Cartel of the Productive Classes). The liberal Hansa League, an anti-agrarian catch-all movement backed by large banks and certain sectors of industry, tried to attract small tradespeople and white-collar workers into their camp by means of a *Mittelstand* program.⁴

Nevertheless, apart from its ideological functions and political purposes, the talk of the "old" and the "new" *Mittelstand* pointed to an important reality: the existence of two groups similar insofar as their members dissociated themselves from those below (the working class) and from those above (big capital) and regarded themselves as the representatives of a threatened but vitally important "healthy middle." For white-collar workers as well as artisans and small tradespeople, objective class position was not the determining factor shaping their lifestyle, expectations, organization, and political behavior. Both groups articulated themselves primarily in order to present a front against those whose class position they shared: the small shopkeepers confronting and distancing themselves from big capital and heavy industry; the white-collar workers confronting and distancing themselves from manual workers. Together they constituted the most important phenomenon distinguishing Wilhelmine society from a clearly divided class society, forming, so to speak, a padding that, tended by the state, dampened the growing class conflict. This padding fell apart in the First World War.

The "New Mittelstand" under Pressure

Immediately after the outbreak of war, temporary economic stagnation and unemployment led to drastic salary cuts for many salaried employees, in some cases involving the breaking of contracts (which many people believed had lost their validity anyway because of the extraordinary turn of events). An association of shop assistants in Hamburg found that, in November 1914, 1,018 of 2,288 members who were still employed had had their salaries reduced, most of them by 25 to 50 percent. Despite the subsequent boom brought about by the war, most salaried employees could not make up for these cuts in salary until the end of 1915, even though the cost of living was rising rapidly. Between 1916 and the end of the war, average salaries rose slightly over their pre-war level but far less than the rise in prices and the rise in wages. Shop assistants polled by the *Deutschnationaler Handlungsgehilfen-Verband* had earned an average of 2,393 Marks a year on 31 July 1914 and 2,829 Marks by 31 July 1917, an increase of 18 percent. During the same period, the cost-of-living index had risen by at least 120 percent, while the wages of workers in civilian industry registered an average increase of more than 40 percent and the wages of those in war industries more than 100 percent.⁵ It is true that some salaried employees in the lower categories had always earned less than skilled manual workers, yet before the war average white-collar earnings exceeded average industrial earnings by about 300 Marks a year, or 15 percent.⁶ By the end of 1917 the promotion of a miner to a salaried position (mine inspector, for example) usually meant a reduction of income. In munitions factories in particular, most manual workers now earned more – sometimes significantly more – than most white-collar workers.⁷

At the same time, the salary differential between the various categories of employees grew narrower. The traditional ranks attained according to seniority lost some of their importance and many younger employees were catching up. For civil servants, the story was similar: From 1913 to 1918, the salaries of upper-level civil servants increased 47 percent, those of mid-level civil servants 72 percent, and those of the lower grades 118 percent; while this meant a decline in real income for all of them, it also meant a leveling of earnings. During the war, which caused inflation everywhere, the earnings differential between wage earners and salaried employees also decreased in other countries, but nowhere as sharply as in Germany and Austria.⁸

Such absolute and relative impoverishment weighed especially heavily on the social status and self-esteem of the white-collar workers, who, until then, had virtually defined themselves in terms of their differences from manual workers; and the disappearing differential proved to be

their chief complaint as well as the main reason for their growing dissatisfaction. The causes of this development were manifold. Employers at first had no need to fear any radical opposition from their white-collar workers, whose organizations were neither strong nor aggressive. It is true that the military authorities, frequently prodded by the employee associations, advocated better pay, but obviously less insistently than they pushed for improving the wages of manual workers – after all, they had no reason to fear mass strikes by the white-collar workers that might jeopardize the war effort. Moreover, employers feared that after the war salary increases could not be canceled as easily as wage increases. Above all, however, with wartime labor shortages, employers could make do with fewer salaried employees more easily than they could with fewer wage workers. During the war the Siemens-Schuckert Company in Berlin increased its manual force by a third but its white-collar staff by only a tenth.⁹ The supply-and-demand situation was more favorable to workers than to most salaried employees.

Apart from their loss of earnings, other trials and tribulations beset the salaried employees. Widespread unemployment at the beginning of the war – although short-lived – brought home to them their real insecurity and dependence on the market; this had implicitly been denied by their *Privatbeamter* ideology. The erosion of the seniority rule in determining salaries and the loss of other specifically white-collar privileges, increasingly impaired their self-image. During the war, there was a sharp rise in the number of women in clerical employment, and, for the first time, in the technical professions, too. The problem of competition from cheap female labor proved vexing to many male employees. The government's failure to grant basic democratic rights, despite the additional burdens and responsibilities imposed by the war, exasperated not only the manual but also many white-collar workers. In 1916 even the right-wing *Deutschnationaler Handlungsgehilfen-Verband* demanded a "democratic reshaping" (*volkstümliche Gestaltung*) of the property-based Prussian franchise. Finally, employees with sympathy for unionization were angered by the fact that employers were even more contemptuous, condescending, and at times hostile toward employee associations than they were toward the strong and aggressive labor unions. As a disciplinary measure, employers blacklisted even members of quite moderate federations for technicians and shop assistants, and almost invariably they refused to negotiate with white-collar organizations. They stuck rigidly to the principle that the relationship between employer and clerical worker had to be "personal" and denounced the "air of class struggle" whenever employees tried to bargain collectively.¹⁰

The responses of employees to their changed circumstances varied. The more the basis of their middle-class status was undermined, the

more tenaciously many of them clung to that status. As late as the end of 1917 one of their spokesmen corroborated this: "We are well aware that there are, at the lower levels, conditions and attitudes favorable to cooperation with the manual workers." But, he said, "We do not belong to the masses and we cannot act *en masse* like the workers. Our contracts are individually negotiated. We have a different relationship to our employers . . . We shall stick to the specific character of our situation and demand a specific 'white-collar' policy."¹¹ Among civil servants, who also suffered from the deprivations of war, discontent did not lead to radicalization. True, they increasingly responded to economic considerations, as demonstrated by the founding of consumer organizations; much more than before the war, they organized themselves along political lines. Nevertheless, because of their traditions and the nature of their work, their protests remained modest.¹² In contrast, private sector white-collar workers gradually recognized the need to act, in their capacity as employees, along lines similar to those of industrial workers. Even highly respected associations, defenders of the status and individuality of the salaried employee, such as the long-established *Hamburger Verein für Handlungs-Commis* (founded in 1858), now felt compelled to resort to collective action, demanding minimum salaries graduated according to function and age. Like most similar associations, the *Deutschnationaler Handlungsgehilfen-Verband* formerly had categorically rejected strikes; but in July 1917 its chairman reported that many members wanted to follow the workers' example and use this "most radical weapon," and he hinted rather openly at the prospect that "ultimately even the masses of employees" would be "ready for wage struggles on a proletarian scale." Indeed, a short time later (1919), the association engaged in successful strike actions.¹³ In the autumn of 1917 office workers of AEG, one of the largest electrical companies in Berlin, decided to strike for higher salaries, and in January 1918 supervisors in Nuremberg factories were advocating joint mass action.¹⁴ What had been sharply rejected by employees before the war as "inappropriate to their standing" or even immoral became acceptable under the impact of war and privation, and a reality in the revolution of 1918-19. Elected committees of employee representatives, which became compulsory by law in many large plants after 1916, served as platforms for employees and workers alike. Herr Jungheim, the director of Siemens, stated early in 1918: "Since the existence of the employees' committees, the office workers have been stirred up and poisoned; the situation is getting worse and worse, and the firm must resist with all its might."¹⁵

Besides taking disciplinary action and dismissing organized employees, employers struck back by hastily setting up "yellow" nonmilitant white-collar associations, which they obviously hoped to use during the

committee elections in their respective firms. The small benefits offered by these company unions to their members were, of course, especially attractive in view of wartime privations. The first yellow staff association seems to have been formed by the Nuremberg firm MAN. In 1917, a similar organization at Krupp's received about 50 percent of the votes cast in committee elections. The yellows adopted a sharply defensive position with respect to the noncompany white-collar associations and were financially dependent on the management of their respective firms.¹⁶ The growth of these organizations during the war was an indication of the counterattack being launched by employers against the increasingly radical employees, who were moving further and further away from their old self-image, an image still fostered by their employers.

As a response to the changing situation, a new pattern of white-collar associations emerged. As early as 1913 the more "progressive" among them had decided to work together, and in 1917 they formed the slightly-leftward-leaning *Arbeitsgemeinschaft freier Angestellten-Verbände* (Federation of Free White-Collar Associations). During the war, two more federations of associations were set up: the middle-of-the-road *Arbeitsgemeinschaft technischer Verbände* (Federation of Technical Associations) and the emphatically middle-class *Arbeitsgemeinschaft kaufmännischer Verbände* (Federation of Commercial Associations). In July 1917, reacting to the difficulties, deprivations, and additional duties imposed by war, these three white-collar federations formally agreed to cooperate more closely in matters of common interest. The move can be seen as a sign of growing disregard for specifically professional and narrowly vocational considerations that hitherto had been dominant in the minds of most organized shop assistants, technicians, engineers, and so forth.

This growing importance of the "employee" component in the consciousness of white-collar workers enabled them to see more clearly what they had in common with other employees and with the workers, as well. It is true, the commercial white-collar associations, in particular, continued to emphasize their specific status and rejected the idea of being organized together with workers in labor boards (*Arbeitskammer*), which were much discussed in 1918. Still, a growing minority of white-collar associations were emphasizing their trade-union orientation and their common interests at least with the moderate wing of the trade union movement, which was anxious for cooperation. On many occasions they banded together to protest to civil and military authorities against the government's rationing policies, against profiteering in food, and for more stringent enforcement of existing regulations. The strength of this movement can be seen in the fact that from the end of 1917 two of the three large white-collar federations – representing about 50 per-

cent of organized salaried employees – had been advocating that they be included in the proposed labor boards, thus waiving any claim to separate representation.¹⁷

This gradual reorientation of salaried employees also was evident in the shifting strengths of their various associations. During most of the war, the membership of all white-collar organizations suffered a notable decline, primarily because of conscription. Moreover, in their dealings with the authorities the white-collar organizations did not come even close to achieving the measure of importance, recognition, and power that enabled the trade unions to attract members from the end of 1916 onward. It is significant, however, that in 1917 one of the three white-collar federations, the *Arbeitsgemeinschaft freier Angestellten-Verbände*, which was by then clearly trade-union oriented and rather left-wing, began to recoup its loss of membership, while the other two federations continued to decline until the revolution brought a new influx of members into all three. This relative growth of the more radical associations during the war reversed the trend of the preceding era, when the conservative associations had grown faster.¹⁸

Despite the trend to the left, most white-collar workers did not develop an explicit working-class consciousness. Even the members of the increasingly socialist-oriented *Arbeitsgemeinschaft freier Angestellten-Verbände* continued to stress the status characteristics distinguishing them from manual workers and refused to support a union that would organize both white- and blue-collar workers. Others seem to have maintained, though in a modified form, part of their traditional antisocialist and nationalistic approach, even if they supported social reforms. At the end of 1918, all the federations reorganized themselves as trade unions, thereby giving a formal character to wartime developments, but some of their essentially middle-class attitudes and aspirations survived under the surface.

War and Petite Bourgeoisie

It is difficult to determine the exact influence of the war on the economic situation of artisans and small shopkeepers, the petite bourgeoisie. In evaluating the different impact of the war on small businesses, on the one hand, and on medium- and large-scale industrial enterprises on the other, it must be borne in mind that small enterprises existed primarily in sectors not vital to the war effort. They therefore were particularly liable to declining profits or even losses. Take the production-goods industries first: Workshops employing one to five workers represented only 16.1 percent of all units in the iron and steel industry, 52.8 percent in

mechanical engineering, 56.6 percent in the chemical industry, and 58.1 percent of the electrical-engineering plants. Small businesspeople in this category played a far more significant part in the hard-hit consumer industries. They owned 67.7 percent of all establishments in printing, 80.1 percent in building, 88.6 percent in toy manufacturing, 91.1 percent in textiles, and 97.4 percent in the clothing industry.¹⁹ The average artisan thus had a smaller share of war profits than the average industrialist. Moreover, the artisan was more likely to be conscripted; and in the case of a smaller firm, the owner's departure was more likely to lead to the firm's disaster. It is estimated that by the end of 1917 about 500,000, or roughly 50 percent, of independent craftsmen had been conscripted and that approximately 33 percent of all workshops had closed.²⁰ Compared with large-scale industry, the average artisan and tradesperson had greater difficulty in obtaining necessary raw materials from the authorities or the trade associations in charge of such allocations.²¹ After the introduction of the Hindenburg Program, which, in the interest of rationalizing war production, drastically increased the state's power to intervene in the manufacturing economy, the government more often shut down small workshops than large ones, even though representatives of the crafts participated in these decisions and succeeded in slowing down the process of mergers and shutdowns.²² At the beginning of the war, the procurement authorities preferred to award contracts to large-scale industry, because artisans were regarded as less efficient. Besides, unlike industry, they did not have special contract departments.²³ Apart from certain occupations, such as the building trades, it was the small shopkeepers who – according to widespread opinion – suffered most when consumption was steadily shrinking, when government departments and large concerns started to distribute goods directly to the consumer, and when price ceilings, rationing, and other regulations controlled distribution far more stringently than they did production.²⁴

However, just as prewar complaints and dire pronouncements about the existing situation and future prospects of independent craftspeople were not borne out by facts, so the complaints and warnings uttered by their representatives during the war cannot always be taken at face value. No doubt the numerous closures often led to temporary losses and sometimes even to hardship, but as a rule they did not result in the "degradation of independent workshop-owners to the level of day-laborers."²⁵ Obviously, most artisans resumed work after their return from the front or their release from plants vital to the war effort (where they probably had earned no less than workers of long standing). According to an informed estimate, in 1907 about 1.3 million such craft-based workshops existed and in 1919 about 1.2 million. Over a long period (1907-25), the proportion of small shops and enterprises (employing one to

five persons) declined scarcely more quickly than between 1882 and 1907, while the percentage of self-employed people fell even more slowly between 1907 and 1925 than between 1895 and 1907. Despite all the disadvantages of the small retail trade, it remained attractive enough that, immediately after the war, the numbers it engaged had risen 2 per cent since 1914.²⁶

Even official representatives of craft interests admitted at the end of 1917 that the guild federations had accumulated such large funds that they had no idea where to invest them.²⁷ The surviving small workshops – in particular the harness makers, mechanics, locksmiths, joiners, cartwrights, cobblers, tailors, and others working for the army – did not do at all badly, particularly since late in the war the procurement agencies, despite the High Command's predilection for the large-scale producer, openly favored the small workshops when new contracts had to be awarded. Obviously the war did not put an end to the deliberate support of the *Mittelstand*.²⁸ However, since the authorities preferred not to deal with individual workshops, it was their own guilds and craft organizations that initially took over the procurement and allocation of contracts (although not legally authorized to engage in such activities). Later the job of seeing to it that the crafts were provided with contracts and raw materials was taken over by specialized supply and distribution agencies, which from the summer of 1915 onward became increasingly centralized. Under wartime pressure, and in close cooperation with the military and civil authorities, the artisans thus developed cooperative self-help organizations that both strengthened them and relieved them of certain managerial tasks. In 1907 only 36 percent of craft workshops had been organized in guilds, but by 1919 this figure had risen to 51 percent. The number of cooperatives (979 in 1914) probably had almost doubled by the end of the war.²⁹ This growing strength and emphasis on collective self-help formed the basis of the crafts' postwar economic and vocational organization. Thus it turns out that the effect of the war on crafts and small business was much more complicated and ambivalent than the complaints of their representatives would lead one to believe.

With respect to their self-image, manifest interests, sociopolitical orientation and readiness to cooperate, the crafts and small trades drew quite different conclusions than the "new" *Mittelstand* from the changes brought about by the war. Only rarely did discontent and bitterness turn into a radical rejection of the economic establishment or the regime itself. Instead, the feeling gained ground among small producers during the war that they were in the same boat with industry. Admittedly, even the war did not eliminate all points of dispute between industry and the crafts. Resentment over the absorption of apprentices by industry; preferential service deferments accorded to industrialists and to industrial

workers, but not to the small shop or store; competition for military contracts (rapidly decreasing because of great demand); as well as fears that the Hindenburg Program and the Auxiliary Service Law of 1916 would tend to discriminate against the independent craftsperson – all these were widely discussed in the trade press. However, even a superficial reading of papers such as the right-wing *Nordwestdeutsche Handwerks-Zeitung* (Hanover) and the moderate *Handwerkszeitung* (Berlin) strongly suggests that in the course of the war attacks on "capitalism," "big business," "free enterprise," and the competitive economy slackened considerably and in places completely disappeared.

Meanwhile two other problems came to the fore. At least one group of independent craftspeople resumed and sharpened its attacks on organized workers and their demands. These attacks had abated in the first half of the war as a result of the *Burgfrieden* (political truce for the duration). Now polemics flared over trade-union demands for worker participation and over apprenticeship agreements, social-welfare policies, strikes, and the growing working-class insistence on equality of status.³⁰ Notwithstanding these attacks, several of the predominantly small factory-type workshops, following established prewar practice, negotiated comprehensive agreements with trade unions much earlier than the larger industrial firms.

The second problem confronting the small independent artisan and businessperson (whether liberal or conservative) was the struggle against "state socialism," the danger of "excessive planning," and the new "coercive system." Misgivings about "state socialism and its failures," about the bureaucracies' economic interventionism, were first provoked by the Auxiliary Service Law of 1916, from which most small business people expected nothing but disadvantages. The war decrees, they argued, were dreamt up by doctrinaire theorists who knew nothing of life and who, as students, had imbibed their wisdom from *Kathedersozialisten* (lectern socialists). The more these regulations threatened to outlive the war and become permanent, the more bitterly were they attacked.³¹

Despite differences in approach and emphasis, a certain consensus began to emerge among the independent artisans and shopkeepers toward the end of the war. While the pressure for limited state aid (supply of credit, access to raw materials, and so forth) was maintained, the radical prewar anticapitalist agitation as well as the clamor for restoration of the guilds were dropped or moderated; the emphasis now centered on self-help, cooperatives, the advance of technical knowledge, and professional standards. Artisans did not want "the kind of welfare provided by the state for workers. Artisans (*Handwerker*) are, in fact, small businessmen." They wanted "the free play of forces ... the necessary freedom of movement had to be restored as soon as possible."³²

This new tendency to put up a cautious defense against state intervention – a tendency partially out of keeping with the belief in an authoritarian state – was a reaction to unprecedented expansion of state activity during the war and state intrusion into the socioeconomic domain. Despite continuing differences in other fields, the crafts and small independent tradespeople thus supported big industrialists' growing opposition to further extensions of state power. With few exceptions, such as the frequently overrated Walther Rathenau, almost all the representatives of employers' interests in industry, commerce, banking, and agriculture turned more and more against "state-socialist bureaucratic tutelage from above" and against encroachments by authorities whose actions they were less and less able to control. The more vociferously this defense of free enterprise against state interference was conducted, the more business tycoons and small traders, industrialists and artisans, shopkeepers and the heads of vast commercial organizations found themselves in the same boat.³³

Apart from some necessary adjustment to obviously irreversible developments by the small independent businessperson, three factors underlay this new trend. First, even before the war, but especially toward its end, when nationalization became an increasingly real possibility, the militancy displayed by organized labor tended to emphasize the community of class interests between the "old" *Mittelstand* and wealthy capitalists, interests that hitherto had been overlaid by old divergencies. In July 1918 the *Deutsche Arbeitgeber-Zeitung* wrote: "In view of the attempts being made by Social Democracy and the trade unions to get the reins into their own hands, all employers, whether large or small, industrialists or artisans ... must take care to defend their position."³⁴

Second, the increasingly successful organization of consumer interests forced the craftsperson and the industrialist into an awareness of their common interests as producers. The cooperative movement, which had lost its self-employed members long before and which had been rejected by both the crafts and the small retail trade, had doubled its strength between 1903 and 1910. Wartime shortages caused consumer interests to loom even larger. This became evident as early as 1914 with the foundation of the *Kriegsausschuss für Konsumenteninteressen* (War Committee for Consumer Interests), made up of representatives of cooperatives, industrial and white-collar workers, and civil servant organizations. It also found expression in the repeated appeals and petitions in which workers and salaried employees made common cause in order to improve the administration of food distribution. The self-employed *Mittelstand*, on the other hand, regarded such consumer organizations as a nuisance, a view shared by the industrialists.³⁵

Third, artisans and small tradespeople could now put aside their anti-capitalist and anti-laissez faire misgivings more easily than before the war, because after 1914 the free working of the market economy had been largely suspended, while the corporatist, state-interventionist structures characteristic of "organized capitalism" were being more firmly established. Reacting defensively to these changes, large and small owners of the means of production got together; and in resisting the intervention of a state threatening to become democratic, they discovered common interests that their differences previously had hidden from view.

The "old" *Mittelstand* and the "new" thus were clearly going their separate ways. Both accepted alliances with groups whose class position they shared but whom they originally had opposed. Objectively and subjectively, the war situation dealt a heavy blow to the – always precarious – middle-class status of salaried employees. Their associations, which formerly stressed the differences between themselves and the working class, now taking a clearly anti-employer stand, emphasized their employee status and their common interests, and desire for cooperation, with workers. The craft and retailer associations, which had been founded on an anti-capitalist basis in the hope of receiving state aid, now stressed their employer status and, in unison with the industrialists and large employers, raised their voices against state control and worker demands.

This wartime polarization of the *Mittelstand* according to class viewpoints did not take place unheralded but emerged slowly and haltingly out of the prewar period and accelerated during the war. Some indications of trade union attitudes were already discernible among a minority of employees before 1914. Among the crafts and small independent tradespeople the first signs of cooperation with employer associations had become visible at the turn of the century, and cooperation had become more visible after 1910.³⁶ The attempts by the more liberal Hansa League and the conservative *Kartell der schaffenden Stände* to find a common platform for segments of the *Mittelstand* and segments of big business illustrate this tendency. Clearly, the trend toward cooperation between capital and the self-employed *Mittelstand* during the war represents a certain continuation of these prewar attempts.

Polarization, Revolution, and Beyond

The relationship of this wartime polarization of the *Mittelstand* to the German revolution of 1918-19 remains to be analyzed. It is almost certain that only in exceptional cases did small tradespeople participate in

revolutionary, radical-democratic, or socialist activities. The papers of their trade organizations were not sympathetic to the revolution. Among employees, however, the November upheaval removed several legal, political, and psychological barriers that during the war had prevented them from openly parading their mounting discontent. All the white-collar federations now clearly advocated a trade-union approach, approving of strikes in principle and excluding employers from membership. In fact it was the more radical white-collar associations that became most popular during the revolutionary period, and most of them took part in the great strikes of the winter of 1918-19. Later on, the left wing of the organized salaried employees, especially those in the socialist Zentralverband der Handlungsgehilfen (Central Association of Shop Assistants), claimed to have played an active and leading role in the revolution. What probably happened is that among the majority of salaried employees, the radicalizing impact of the war and opportunist adaptation to a rapidly changing situation evoked a comparatively tolerant and basically approving attitude toward the revolution; and though this attitude, as a rule, was far removed from proletarian class consciousness and radical-democratic zeal, it was at least equally far removed from a defense of the old establishment or the ruling groups now under attack.³⁷

Between the end of the war and the National-Socialist takeover, these trends were partly continued and partly reversed. The differential between wages and salaries continued to shrink, though not as rapidly as during the war and the 1923 inflation. The nominal income of workers (average annual values) rose by two-thirds in the fifteen years between 1913 and 1928, while that of salaried employees rose only about one-third. At the beginning of the Great Depression of the 1930s, the average real income of both semiskilled and skilled workers exceeded that of the prewar period. However, the real salary of most white-collar workers had not yet reached the 1913 figures. The slow disappearance of the wage-salary differentials paralleled similar changes in other highly industrialized countries, although elsewhere it took place less abruptly and without the long stagnation in terms of real per capita income.³⁸

Postwar developments tended to have an especially adverse effect on the property-owning segments of the middle classes. The general impoverishment of the German people was reflected in the decrease in the number of those receiving high or above-average incomes and in the relative increase of those in the lower income brackets. Between 1913 and 1928, the share of total national income accruing to property (including undistributed profits) fell from 49.7 percent to 30.4 percent, while income from wages, salaries, and pensions rose from 48.3 percent to 67.7 percent. Because the proportion of self-employed among the whole working population declined much more slowly during the same period

(their absolute numbers in fact increased), it follows that a growing number of property owners received a decreasing share of the national income.³⁹ Artisans and small tradespeople also suffered from these developments. The runaway inflation of 1923 – it had already set in during the war – affected property values other than those invested in real estate and tangible goods, including the savings accounts so popular among the middle classes. The collapse of war-bond issues affected many middle- and small-income earners, who frequently had invested most of their savings in them. Debenture holders were paid off in depreciated currency. After the inflation, claims based on life insurance policies and mortgages were worth little. Although house owners could use the inflation to pay off their mortgages, housing and rent controls depressed their revenues even more heavily than falling real-estate prices.⁴⁰ The number of public welfare recipients more than trebled between 1913 and 1924. The vast majority of these were old people and widows who, had there been no war or inflation, probably would have lived quite comfortably on their savings and small pensions. In 1926 almost 70 percent of men on public assistance had been self-employed in trade or agriculture at one time or another.⁴¹ The postwar period, with its runaway inflation, seems to have hit the self-employed *Mittelstand* much harder than the war.

Developments initiated among white-collar and artisan associations in wartime were not always continued in the 1920s. True, cooperation among the various white-collar associations and their grouping according to political criteria continued and even deepened. However, the trend toward the left that characterized the history of white-collar workers during the war years was not continued during the Weimar period. On the contrary. In 1920 the social-democratic Allgemeine freie Angestelltenbund (General Free White-Collar League: AfA) (690,000 members) was larger than the more right-wing Gesamtverband Deutscher Angestelltengewerkschaften (General Association of German White-Collar Trade Unions: Gedag) (463,000 members) and the moderate-liberal free-national white-collar associations (300,000 members). However, during the next decade a shift took place, and by 1930 the right-wing Gedag held a commanding lead while AfA had lost almost 30 percent of its members. During the period 1930-32, white collar workers were strongly represented among the members and voters of the National Socialist Workers' Party, though to a lesser degree than we originally thought. Still, during the 1920s, the wartime shift to the left among white-collar workers was partly reversed; social-democratic forces derived less and less benefit from the discontented salaried classes; many white-collar workers eventually gave their sup-

port to right-wing parties and thereby contributed to the destruction of the first German republic.

Divergencies between the independent tradespeople and large-scale industry again asserted themselves once the immediate danger of "state socialism" had passed and the revolution had failed to bring the proletariat to power. Among the differences were the social-protectionist demands in the late 1920s by which small business tried, without success, to revive prewar economic patterns and traditions. Nevertheless, the basic pattern of closer understanding between small- and large-scale enterprises continued and was reactivated in the crisis of the early 1930s. As Joseph Schumpeter put it in 1929, the small independent tradesperson "has learned to abandon the sharply anticapitalist attitude with which he entered the twentieth century and to identify himself more readily with large-scale industry. In turn, industrialists have grasped or are beginning to grasp that consideration for the petty bourgeois can be more important for their own social opportunities than the economic advantages derived from the elimination of this class."⁴² This reorientation of the "old" *Mittelstand* was promoted during the First World War. In a way it anticipated the uneasy alliance of big industrialists and small businesspeople against labor, democracy, and parliamentarism that contributed to the National Socialist victory in 1933.⁴³

Notes

1. *Statistisches Jahrbuch für das deutsche Reich* (Berlin, 1914), p. 14f.; K.M. Bolte, "Angestelltenfrage im Licht der Zahlen," in *Der Angestellte zwischen Arbeiterschaft und Management*, ed. Hans Beyer (Berlin, 1961), p. 67.
2. Cf. J. Kocka, *Unternehmensverwaltung und Angestelltenschaft am Beispiel Siemens 1847-1914* (Stuttgart, 1969), pp. 463-544.
3. Cf. H.A. Winkler, "Der rückversicherte Mittelstand," in *Zur Soziologischen Theorie und Analyse des 19. Jahrhunderts*, ed. W. Rüegg and O. Neuloh (Göttingen, 1971), pp. 163-79; J. Wein, *Die Verbandsbildung im Einzelhandel* (Berlin, 1968).
4. D. Stegmann, *Bismarcks Erben* (Düsseldorf, 1970), pp. 143ff., 176ff., 360ff.; H.-J. Puhle, *Agrarische Interessenpolitik und preussischer Konservatismus* (Hanover 1966), p. 98ff.
5. *Jahrbuch der Angestelltenbewegung*, (Berlin, 1914-1915), p. 182f.; *Archiv für Sozialwissenschaft und Sozialpolitik* (hereafter *ASS*) 41 (1916): 589, 602f.; *ibid.* 44 (1917/18): 321.
6. Cf. S. Aufhäuser, *Weltkrieg und Angestelltenbewegung* (Berlin, 1918), p. 40.
7. *Deutsche Industriebeamten-Zeitung* (hereafter *DIBZ*; Berlin, 1917), p. 197; *Deutsche Handels-Wacht* (hereafter *DHW*; Hamburg, 1918), p. 39.

8. Cf. *Zahlen zur Geldentwertung 1914-1923*, suppl. to *Wirtschaft und Statistik* (Berlin, 1925), p. 43; Bureau International du Travail, *Fluctuations des Salaires dans différents pays de 1914 à 1922* (Geneva, 1923), p. 74f.
9. Cf. G.D. Feldman, *Army, Industry and Labor in Germany* (Princeton, 1966), p. 468; Werner von Siemens Institute, Munich, Siemens-Archiv-Akte (SAA), 29/Le 932, 1.
10. Cf. *Deutsche Arbeitgeber-Zeitung*, 19 July 1914, 5 March 1916, 14 October 1917, 1 September 1918; *DIBZ* (1918), pp. 10ff., 22, 101ff.; *DHW* (1918), pp. 35, 40.
11. *DIBZ* (1918), p. 7.
12. Cf. K.-L. Ay, *Die Entstehung einer Revolution* (Berlin, 1968), p. 94ff.; *ASS* 41 (1916): 903-26.
13. *DHW* (1917), pp. 89-91; (1919), p. 53f.
14. *DHW* (1918), p. 25; Ay, *Die Entstehung*, pp. 101f., 198.
15. *DHW* (1918), p. 48.
16. Cf. Aufhäuser, *Weltkrieg*, p. 105f.; *ASS* 44 (1917/18): 340f.
17. *DHW* (1918), pp. 2, 19; *DIBZ* (1915), p. 196f.; *DIBZ* (1917), pp. 39, 43, 52-55; P. Umbreit and C. Lorenz, *Der Krieg und die Arbeitsverhältnisse* (Stuttgart, 1928), p. 167.
18. *Reichsarbeitsblatt*, special suppl. no. 11 (1915), II, 22ff.; no. 16 (1918), III, 8ff., 40ff.; no. 20 (1920), II, 29ff.
19. *Statistik des deutschen Reichs* (1937), p. 188ff.
20. F.H. Will, *Das Handwerk als Kriegslieferant* (Hanover, 1923), p. 40.
21. *Handwerks-Zeitung: Amtliches Organ der Handwerkskammern* (hereafter *HWZ*; Berlin, 1917), p. 48.
22. *Nordwestdeutsche Handwerks-Zeitung: Organ des Nordwest-Deutschen Handwerker-Bundes* (hereafter *NHWZ*; Hanover, 1917), pp. 37f., 58f., 137f.; *NHWZ* (1918), p. 2.
23. R. Fichte, *Die grosse Zeit im Deutschen Handwerk* (Berlin, 1922), pp. 11f., 27ff., 33.
24. Cf. the Reichstag debate 13-14 March 1916, in: *Stenographische Berichte über die Verhandlungen des Reichstags* 311 (1916), p. 4354ff.
25. W. Schmidt, *Das Deutsche Handwerk im Weltkriege* (Essen, 1929), p. 35.
26. W. Wernet, *Handwerkspolitik* (Göttingen, 1952), p. 77; *Statistik des deutschen Reichs* (1937), p. 186ff.; R. Meerwarth et al., *Die Einwirkungen des Krieges auf Bevölkerungsbewegung, Einkommen und Lebenshaltung in Deutschland* (Stuttgart, 1932), p. 236.
27. Representative Hammer, 14 December 1917, *Wörtliche Berichte über die Verhandlungen des Preussischen Abgeordnetenhauses*, vol. 7 (1917/18), p. 7176.
28. Cf. Fichte, *Die grosse Zeit*, pp. 24, 28, 46ff.; K. Roesler, *Die Finanzpolitik des Deutschen Reiches im Ersten Weltkrieg* (Berlin, 1967), p. 117.
29. Cf. H. Lübbering, *Handwerkerfragen zur Kriegszeit* (M.-Gladbach, 1915), esp. p. 11ff.; Rahardt in *HWZ* (1917), p. 181f.; Fichte, *Die grosse Zeit*, pp. 76f.; Wernet, *Handwerkspolitik*, pp. 73, 77.
30. *NHWZ* (1917), pp. 58f., 66, 118, 133, 139; *NHWZ* (1918), pp. 33f., 77, 117.
31. Cf. *NHWZ* (1917), pp. 58f., 95, 122, 142, 181ff.; *NHWZ* (1918), pp. 1, 13, 15, 18, 36, 77, 116; *HWZ* (1917), p. 78; *Stenographische Berichte über die Verhandlungen des Reichstags* 311 (1916), pp. 4145, 4369ff.
32. *NHWZ* (1918), pp. 160-70.
33. Cf. *NHWZ* (1917), p. 1818ff.; *Deutsche Arbeitgeber-Zeitung*, 23 December 1917 (polemics against state intervention).
34. *Deutsche Arbeitgeber-Zeitung*, 28 July 1918, suppl.
35. *Jahrbuch der Angestelltenbewegung, 1914-15*, p. 186f.; Wein, *Die Verbandsbildung*, pp. 61, 91ff., 104ff.; W. Kulemann, *Genossenschaftsbewegung* (Berlin, 1922), vol. 1, p. 84.
36. Cf. E. Lederer, *Die wirtschaftlichen Organisationen* (Leipzig, 1913), p. 105.
37. Cf. *ASS* 47: 585-619.

38. M. Victor, "Verbürgerlichung des Proletariats und Proletarisierung des Mittelstandes," *Die Arbeit* (Berlin, 1931), p. 23; G. Bry, *Wages in Germany 1871-1945* (Princeton, 1960), p. 362; F.W. Fischer, *Die Angestellten* (diss., Heidelberg, 1931), p. 23.
39. Cf. *Statistisches Jahrbuch für das deutsche Reich* (Berlin, 1930), p. 532f.
40. Cf. R. Lewinsohn, *Die Umschichtung der europäischen Vermögen* (Berlin, 1926), pp. 27-31; C. Bresciani-Turroni, *The Economics of Inflation* (London, 1937), p. 314ff.
41. *Sozialer Auf- und Abstieg im Deutschen Volk*, Beiträge zur Statistik Bayerns, no. 117 (Munich, 1930), p. 120.
42. J. Schumpeter, "Das soziale Antlitz des Deutschen Reiches," in *Aufsätze zur Soziologie* (Tübingen, 1953), p. 221.
43. Cf. H.A. Winkler, *Mittelstand, Demokratie, und Nationalsozialismus* (Cologne, 1972).

Chapter 13



The Difficult Rise of a Civil Society

Modern Germany 1800-1990

In the late 1960s and 1970s, a new paradigm of German history emerged: history as “history of society” or “societal history” (*“Gesellschaftsgeschichte”*). It never became the dominant paradigm, and it always was extremely varied – not a homogeneous school at all. But in the following years it strongly influenced the work of many historians of modern Germany. It helped produce interpretations of nineteenth- and twentieth-century German history that emphasized its social dimensions, took 1933-1945 as a pivotal period, and interpreted the German case against the background of Western European developments, by more or less explicit comparison and usually in a critical – or self-critical – mood.

Nowadays this perspective on German history continues to be strong and productive. But over the years it has changed, and it has to cope with a new situation. It has broadened by learning from some of its major challenges: gender history (from the 1970s on), history of everyday life (in the 1980s), and the new cultural history (1980s and 1990s). The restoration of a German national state has started to alter the perceptions of historians. The postmodern intellectual currents of the day deeply challenge some of the intellectual convictions on which societal history is built.

Where do we stand now? This essay first sketches some of the debates over *Gesellschaftsgeschichte* as a controversial approach to modern German history. It then introduces a possible approach for an eventual societal history of modern Germany: the concept of civil society. The

Notes for this section begin on page 296.

remainder of the essay presents the basic outline and major turning points of the development of civil society in Germany from the late eighteenth century to the present and discusses two topics in slightly more detail: the role of the bourgeoisie and the role of the working class. This can be justified since the problem of civil society was indeed closely linked to the development of the bourgeoisie and the working class. Many other topics and problems might have been discussed in the context of the history of German civil society. But in this short essay, they had to be left aside. "Bourgeoisie" is used in the sense of the German "*Bürgertum*," a concept sometimes translated as "middle class." All these concepts are not completely congruent. Again, a choice had to be made.

A Changing Approach

In the 1960s and 1970s, "social history" caught the imagination of a young generation of historians. It became a central concept – and a rallying point – of historiographic revisionism. It meant many things at the same time. It gave priority to the study of particular kinds of phenomena, such as classes and movements, urbanization and industrialization, family and education, work and leisure, mobility, inequality, conflicts and revolutions. It stressed structures and processes over actors and events. It emphasized analytical approaches close to the social sciences rather than by the traditional methods of historical hermeneutics. Frequently social historians sympathized with the causes (as they saw them) of the little people, of the underdog, of popular movements, or of the working class. Social history was both demanded and rejected as a vigorous revisionist alternative to the more established ways of historiography, in which the reconstruction of politics and ideas, the history of events and hermeneutic methods traditionally dominated.

There were two meanings of social history. On one hand, social history was understood as the history of one dimension of historical reality, as history of social structures, processes, practices, and meanings – in contrast to political history, economic history, cultural history, and other subdisciplines of similar range. On the other hand, social history was conceived of as an approach to general history studied from a social-historical point of view. It is for this second variant of social history that in West Germany the label "*Gesellschaftsgeschichte*" emerged: history of society, or societal history.

Clearly, societal history aimed at including the study of the political system, economic change, and cultural patterns as well as the study of the social sphere proper, but by stressing social (and sometimes economic) factors. The project of societal history aimed at "*Zusammenhang*" (making

connections), at overall structures in a diachronic and synchronic sense. It claimed to reconstruct the relatedness of the different spheres or spaces or dimensions of history, and it intended to conceptualize this interrelatedness as "*Gesellschaft*" (society). There was a fundamental conviction that one must not dissolve the past into its constituent parts if one wanted to understand it. Societal history wanted to get below the surface, the events, the perceptions, the images – without abstracting from them altogether. It did not just ask "how?" but also "why?" Frequently it was hoped that in this way historical knowledge would be attained that would contribute to a better orientation and more enlightened practice in the present. Practitioners of societal history were aware that they could succeed with such an ambitious project only if they were prepared to choose advanced analytical tools: explicit and well-defined concepts, theories, and models, sophisticated qualitative and quantitative methods. They looked to neighboring social sciences for suggestions and cooperation. There was much methodological and theoretical self-reflection about societal history's conditions and consequences.¹

Beyond these common traits, societal history appeared in very different forms, as one can see if one compares major practitioners of the field in different countries: Hans-Ulrich Wehler in Germany, Eric Hobsbawm in England, Fernand Braudel in France, and Charles Tilly in the United States. Different approaches were used: Marxist ideas inside or outside the tradition of historical materialism, concepts of modernization, Weberian approaches, theories of social inequality as well as other approaches, frequently eclectic, self-made bricolages. The full-fledged synthesis was the exception, reserved for the masters in the field. More frequent were synthetic sketches, frameworks within which more detailed, monographic studies could then be embedded. Very often it was just the general perspective, the intellectual mood, that showed the indebtedness of an article or a book to societal history. It was rare that the project as a whole could be fully realized.²

In the 1960s and 1970s, the main adversaries of societal history were proponents of political history. In Germany they were influential. But one should not overlook that most practitioners of societal history did not ignore politics but, rather, tried to relate politics to social and economic factors.³

Later, women historians criticized the gender-blindness of societal history, which, indeed, had privileged class and ignored gender as well as other dimensions of social inequality. It proved possible to broaden the parameter of societal history, however, and historians like Ute Frevert have practiced gender history within frameworks indebted to traditions of societal history. But the relationships between class, gender, and ethnicity continued to be a classical, not fully resolved, issue within societal history.⁴

In the 1980s the most interesting attack came from the proponents of the history of everyday life (*Alltagsgeschichte*). They were suspicious of big analytical concepts like industrialization, class formation, nation building, and urbanization often used by practitioners of societal history. Instead, they sought to reconstruct the world of the past from the viewpoints, and with the concepts, of people of the past – a “historicist” strategy, the inherent difficulties of which had long been criticized by analytical historians inside and outside societal history. Historians of everyday life regarded societal history as overly structuralist and preferred to study the subjective side: how people of the past experienced, perceived, and – perhaps – changed their world. Everyday historians criticized societal history as “history from above” (which was only partially true) and frequently advocated “history from below.” They preferred micro-historical studies, and they usually neglected – or rejected – societal history’s stress on broad context and interrelatedness.

This debate had, I think, three results. First, it revealed the built-in limits, weaknesses, and contradictions of the history of everyday life if presented as a strict alternative (not a supplement) to societal history. Second, it helped practitioners of societal history to be aware of the indisputable fact that a full reconstruction of the past cannot succeed without attention to perception and agency. For example, to measure and describe patterns of social mobility is only one step; it does not tell us anything about the experiences, values, and actions of people in response to social stability or change. As a consequence, societal history has become more sensitive to subjective factors. Its practitioners have tried to combine structure and agency, process and experience, with varying degrees of success. But third, it has become clear that there is, and remains, a gap and a tension between societal history and the history of everyday life. If one wants to understand *conditions* and *consequences* of perceptions, decisions, and actions, if one aims at an understanding of interconnections and synthesis, one cannot do without analytical approaches and one has to reconstruct structures and processes that are inaccessible or uninteresting to historians of everyday life.⁵

The most productive challenge came from the “new cultural history” of the 1980s and 1990s (pioneered in the 1970s). Practitioners and advocates of cultural history (or sociocultural history), which itself is extremely diverse, have criticized societal history for neglecting the production and destruction of meaning, processes of signification and designification, cultural practices and products, the symbolic aspects of historical reality, language and other forms of communication – that is, dimensions of history that are woven into all other dimensions as well and that are present whenever humans relate to each other and to their world. They have a point. German social history (including societal his-

tory) emerged by distancing itself from older traditions that had strongly privileged the dimensions of meaning, intentions, and actions as well as a fictitious world of "objective ideas" at the cost of material conditions, social relations, and problems of inequality, authority, and dependence. German societal history found it necessary to confront and redress an unequal balance, and in this process new imbalances may have emerged, this time at the cost of cultural aspects.

In recent years, impulses from French, English, and American cultural history, from cultural anthropology, and from the classical writings of Georg Simmel, Ernst Troeltsch, Norbert Elias, and again Max Weber were picked up. Reinhart Koselleck's *Begriffsgeschichte* (history of concepts), which has always been open to semantic *and* social history, served as a bridge. Anyway, many social historians had already included culture when they studied the working class, the bourgeoisie, gender relations, or family history. Societal history rejects the totalizing claims of cultural historians who equate culture with the totality of the historical process. It rightly rejects the absolutist claims of some adherents of the "linguistic turn" who deny that anything is accessible to historians except texts. But societal history is well on the way toward incorporating cultural-historical approaches that pose new theoretical and empirical problems not yet fully resolved. In the process, societal history and the forms of its presentation will necessarily change, and it remains to be seen how far this will go.⁶

The Dynamics of Civil Society

Societal history has been practiced by German writers in very different forms. Modernization theory was used, by Thomas Nipperdey, for example, to construct a synthesizing account of German history in the nineteenth and twentieth centuries. Theories dealing with the succession of "societal formations" in a revolutionary or nonrevolutionary way have informed accounts of societal history, not only by East German authors but also by West German historians such as Reinhard Rürup in his synthesis of the period between 1815 and 1871. There have been attempts to use the concept of a "class society" to structure syntheses or frameworks for monographic studies, as I did in my book on the First World War. Hans-Ulrich Wehler's *Gesellschaftsgeschichte*, which uses a flexible Weberian approach, is so far the most important accomplishment in the field of societal history: three volumes have so far appeared, concentrating on Germany during the "long nineteenth century" from 1789 to 1914; a fourth is in preparation.⁷

Recently some progress has been made in conceptualizing German history from the late eighteenth century to the present in terms of an as-yet-unfinished (and probably never-finishable) process of birth, crises, breakdown, and resuscitation of civil society. Research on the history of the German bourgeoisie (*Bürgertum*) has been intensive over the last one and a half decades, and it has contributed much to the sharpening of the concept "*bürgerliche Gesellschaft*" or "*Bürgergesellschaft*" (bourgeois or civil society). (It should be remembered that "*Bürger*" stands both for "bourgeois" and for "citizen.") Notions and visions of "civil society" were widely discussed in the late 1980s and early 1990s in east-central Europe by dissenting intellectuals who used this tradition to criticize dictatorial communism. A comparative approach based on the concept of "civil society" could become a way of conceptualizing and writing German societal history of the last two hundred years.

The concept of civil society that I have in mind emerged as a utopian project in the second half of the eighteenth century and in the early nineteenth. Many different authors have contributed to it in different ways: from Locke, Ferguson, and Adam Smith through Montesquieu and the *encyclopédistes*, to Kant, Hegel and the liberal theorists of the post-Napoleonic period.

Of central importance was the vision of a modern, secularized society of free and self-reliant individuals who would manage their relations with one another in a peaceful and reasonable way, through individual competition as well as through voluntary cooperation and association, without too much social inequality and without the tutelage of an authoritarian state. For that purpose certain institutional arrangements were needed: the guarantee of individual rights; the protection of the family; markets; an arena for public debate; the nation-state; due process of law; constitutional government; and parliamentary representation. These demands were intrinsically linked to a new conception of social relations: work, achievement, and success – not birth and privilege – should determine the distribution of wealth, status, and power. Education should be of utmost importance. The public use of reason should replace legitimation by tradition. Private and public life should be clearly distinguished. Certain cultural attitudes, norms, and practices – including individual self-discipline and cleanliness, strictly defined differences between the sexes, certain aesthetic values and a clear notion of superiority vis-à-vis the natural world – should become universal. This was a culture that had been pioneered and emphasized in bourgeois circles, in the emerging *Bürgertum*. At the same time, the project of a civil society claimed universal applicability. In principle, it aimed at freedom, equal opportunities, and participation for all. In that, it reflected its roots in the ideas of the Enlightenment.

This was its basic contradiction. On one hand, it claimed universal applicability. On the other, it was intrinsically tied to the very small bourgeois milieu, not only in the sense that this was the social location where it originated but also in the sense that bourgeois status – including individual independence due to wealth or position and education – was needed to fully qualify as a citizen. Nineteenth-century voting laws made that very clear, and this meant that both the female half of the population and the mass of lower and lower-middle classes were virtually excluded from citizenship, from the demands and promises of the project of civil society. Universalist claims versus exclusive reality – it took two centuries to reduce this discrepancy, which was most effectively challenged by the socialist labor movement and Marxist criticism, later by the feminist movement, and by liberal-democratic reformers throughout the period. All of them basically used the claims and the principles of the model of civil society to criticize the imperfect stage of its realization. Processes of democratization were demanded and pushed through; the welfare state was developed; some steps toward greater equality between the sexes were finally achieved. New difficulties, dangers, and crises emerged. There were setbacks and breakdowns, particularly during the dictatorships of the twentieth century. In these conflicts and processes, the concept of civil society changed. It will have to change further in order to cope with the problems of the present and the future. It has nowhere been fully realized as yet, and its worldwide extension has only begun.⁸

What has been and continues to be a normative concept with political, social, economic, and cultural reach can be reformulated as an ideal-typical concept and used for analytical purposes. How did civil society develop in Germany? What was specific to the German case? What were the decisive turning points?

The Rise of Civil Society in Germany, 1800-1918

In Germany, a civil society emerged in several stages between 1800 and the early 1870s. Certainly, there had been preparations in the eighteenth century: capitalism had slowly advanced in both agriculture and industry, and some administrative and legal reforms had taken place, for example, in Prussia in 1794. But it was in the period between 1800 and 1815/18 that the feudal order in the countryside and the *ständisch* (corporate) order in the towns were either brought to an end or severely weakened. This laid the legal ground for the dynamics of capitalism in the coming two centuries. Far-reaching educational reforms institutionalized the importance of education, which became the other great dynamic force of the era to come. Administrative and constitutional reforms were limited,

but not altogether absent; they provided for the eventual political participation of the emerging bourgeoisie and other social groups. A national movement began. Directly or indirectly, French influence was decisive. Basically, these were reforms from above in a largely traditional society; popular movements played only a marginal role.

In contrast, popular movements were important in making liberal demands for constitutional reform partly successful in some German regions in 1830/31. A similar constellation – though more dynamic and socially more heterogeneous – appeared in the revolution of 1848/49, which did not just end in defeat but also advanced the cause of civil society: by accelerating the still unfinished business of agrarian reform, by making economic policy more favorable for industrialization, and by establishing constitutional government (though of a rather conservative nature) in the two leading monarchies of the German Federation, in Prussia and Austria.

It was the decade from the early 1860s to the early 1870s that brought the decisive breakthrough. Legal reforms gave the final blow to the surviving remnants of the feudal and corporate order and loosened the government's encroachment upon society; all kinds of controls and checks were weakened, economic change and social mobilization accelerated. The Industrial Revolution quickly advanced, social conflicts sharpened, and the labor movement emerged. A German nation-state was put together under Prussian hegemony, under Bismarck's guidance, and with the help of three wars, something the revolution of 1848/49 had sought in a different way, but in vain. And the constitutional question was decided: against full parliamentarization as demanded by the liberals, and in effect maintaining much of the power of the old elites and old institutions; but also against the reactionary demands of many conservatives and in favor of a constitution with some liberal elements. Universal suffrage for men in national elections – rather democratic for the period – added a further element that Bismarck meant to be a weapon against the liberals. This compromise sharply distinguished German constitutional history of the following decades from the Western European model of parliamentary government. Again, radical change had been guided "from above"; but, in contrast to his predecessors of 1800-1815, Bismarck had to come to terms with an active sociopolitical movement, the liberals, whose conflict and cooperation with the government deeply influenced the decisions and results of the decade.

By the 1870s, the core elements of a civil society had been established, in a peculiarly German way. They were further developed in the phase of the empire (1871-1918): a capitalist economy, highly dynamic, innovative, increasingly industrialized, and growing; a relatively liberal system of law regulating essential elements of civil society, namely, civil

rights, private contracts, and family life; a functioning arena of public debate; many voluntary associations and citizen initiatives; a dynamic system of education and science; competing parties and constitutional government. On the other hand, the Kaiserreich definitely was not a parliamentary system. Much political power and cultural influence stayed with the old elites, the nobility, the bureaucracy, and the army. Everyday life and public culture were tainted by social militarism and civil bureaucratization. Nationalism grew, became more aggressive, and moved to the right, in close association with growing illiberal moods and movements. On the national level at least, liberalism severely declined. Constitutional reforms got stuck. It took a war, a humiliating defeat, and another revolution to realize parliamentarization, against stiff resistance. The Kaiserreich on the whole: a deeply ambivalent and unstable compromise on the difficult path toward civil society in Germany.⁹

Bourgeoisie and Working Class

The rise of civil society was intrinsically linked to the changing class structure, especially the changing character and role of the middle class or bourgeoisie (*Bürgertum*). While older historiographical traditions had tended to equate the history of the bourgeoisie with the history of merchants, bankers, manufacturers, industrialists, and other business people, in recent years a more balanced view emerged that gives due credit to the educated, professional bourgeoisie (*Bildungsbürgertum*), that is, to educated persons such as doctors, professors, ministers, lawyers, and other professionals as well as academically trained administrators and civil servants. These groups – according to contemporary observers and on the basis of understandable criteria – belonged to the bourgeoisie every bit as much as the economic bourgeoisie (*Wirtschaftsbürgertum*), that is, capitalists, entrepreneurs, managers, and the like. What the various segments of the bourgeoisie had in common was not a shared class position in a Marxian sense but two other factors. First, they shared common opponents. In the eighteenth and nineteenth centuries, they set themselves apart from the world of aristocratic privilege, unrestricted absolutism, and religious orthodoxy; and in the nineteenth and twentieth centuries, from those below them, the lower strata, the people, the working class. Second, the different sections of the bourgeoisie shared a common culture, defined by a specific type of family life and unequal gender relations, respect for work and education, and emphasis on personal autonomy, achievement, and success; and by a specific view of the world and a typical style of life in which clubs, associations, and urban communication played an important role. It was on

those common grounds – common opponents and a common culture – that the bourgeoisie, in spite of its remarkable heterogeneity in most other respects, developed something like a common identity and became a major propagator of progress with an outstanding impact on social, political, economic, and cultural change, in eighteenth-, nineteenth-, and twentieth-century Europe.

It was not its small size (5-7 percent of the population, not counting the much larger *petite bourgeoisie*, or lower-middle class) that made the German bourgeoisie distinct; in this respect other European cases were not much different. Nor was it specific to Germany that bourgeois support for and identification with the project of civil society became much weaker in the late nineteenth century and early twentieth than it had been in the late eighteenth and early nineteenth; everywhere the bourgeoisie became more established, exclusive, conservative, and defensive in the course of time. Nor can one hold, in contrast to an older view, that in Germany the upper bourgeoisie was particularly “feudalized” or “aristocratized” in the late nineteenth century. In Britain and France the development of a composite elite out of parts of the nobility and parts of the bourgeoisie was more advanced than in Germany.

Rather, besides a high degree of regional and religious differentiation, four specifics of the German bourgeoisie should be mentioned. First, relative to the business and economic bourgeoisie, the *Bildungsbürgertum* was extremely strong, well-respected, and influential in Germany. Second, inside the *Bildungsbürgertum* civil servants clearly played a leading role, and this correlated with the strong bureaucratic traditions, inclinations, and orientations of the German bourgeoisie in general. Third, the social dominance and political influence of the German bourgeoisie appears to have been relatively weak compared to those of the West, though relatively strong compared to those of Eastern Europe. And fourth, the German bourgeoisie was challenged by a particularly well-developed working class and a remarkably strong labor movement. Preceding chapters have dealt with these issues.¹⁰

In Germany as in most other countries, the emergence of a working class was closely linked to industrialization. German industrialization had its breakthrough in the period between the 1840s and the 1870s, though with marked regional variations, and further accelerated during the *Kaiserreich* (see Table 1). It was industrialization as well as concomitant migration and urbanization (see Table 3) that turned wage labor (which, of course, was a much older institution) and the separation between household and industrial work (again not completely unknown before) into mass phenomena. Relations between workers and employers changed, communication between different types of workers increased, and they shared common experiences and learned to

articulate common interests, particularly under conditions of tension and conflict with employers, other parts of the bourgeoisie, and the authorities. In this configuration, though nourished by different roots (among them old journeyworker and artisan traditions), something like a working-class culture emerged; it was influenced as much by specific living conditions and experiences of dependence and exclusion in the public sphere as by work-experience itself, and it was separate from, critical of, but influenced by, bourgeois culture. It was this configuration that made possible the emergence of specifically working-class actions and labor organizations, to which minorities of workers committed themselves: strikes and protests, cooperatives and friendly societies, unions and worker parties.¹¹

This was a complicated, unfinished process of class evolution, the initial and formative phase of which occurred in Germany in the third quarter of the nineteenth century. It accelerated, spread, and deepened in the following decades. In 1907, as Table 2 shows, 55 percent of the labor force was counted as "*Arbeiter*" (blue-collar workers), only 10 percent to the category of salaried personnel, and about 20 percent to the shrinking category of "self-employed" (the rest were defined as "family helpers"). By 1907 (see Table 1), the industrial sector (including crafts, manufacturing, construction, and mining) had become the largest sector, absorbing 40 percent of the labor force (compared to agriculture at 35 percent and services at 25 percent). In manufacturing and mining (in units with ten or more employees), 120,000 entrepreneurs and managers were confronted by 6.2 million blue-collar workers (and only 615,000 white-collar employees). From 1871 to 1910, the proportion of the population living in places with fewer than 10,000 inhabitants had fallen from 81 percent to 54 percent, and the percentage of inhabitants of large towns (of more than 100,000) had increased from 5 percent to 27 percent (Table 3).¹² Such figures only suggest the growing *possibility* of working class formation. But other evidence points to corresponding changes in attitudes and behavior as well. On the eve of the First World War, roughly 3 million workers belonged to unions, the overwhelming majority of them to socialist or social-democratic ones. About 30 percent of all workers outside agriculture were unionized. Industrial conflict became massive. There were years (1905, 1912) in which about 500,000 workers participated in strikes or became victims of lockouts, far surpassing earlier figures. In 1912 the strictly oppositional Social Democratic Party won 35 percent of the national vote; among its 4.25 million voters, workers undoubtedly were in the majority. Class language abounded. Class distinctions and tensions structured the social reality of the empire more than any other fault line of social differentiation or tension. Although intermediations and loyalties bridging class divisions were certainly not altogether absent,

on the eve of the First World War German society had become a class society to a much greater extent than ever before.

It would not be correct to assume that the German labor movement was more radical than similar movements in France, Italy, or other parts of Europe. Nor, in general, were civil rights, political opportunities, and social opportunities withheld from German workers to a greater extent than from their counterparts in other European countries. Rather, two other specific features of the German situation should be emphasized. First, the relative timing was important. Separate workers' parties in Germany were a product of the 1860s. This was early by international standards; it stemmed from the early introduction of universal suffrage for men and indicated the limited capacity of German liberalism to reach out, integrate, and dominate. The simultaneity of the emergence of the labor movement, the formation of a nation-state, and the decisive breakthrough of civil society should be stressed as specific to the German pattern of development. This simultaneity may have contributed to a fundamental tension between civil society and nation-state, on one hand, and the labor movement, on the other.

Second, the German labor movement was especially large and well-organized, offering a principled opposition on a well-elaborated theoretical basis derived from democratic thought and Marxist socialism. It was not very disruptive in reality, but it did present a vigorous challenge to an inflexible political system and a hierarchical society. Perhaps this was due to a distinct pattern of class formation, perhaps to the impact of surviving feudal and corporate traditions; it certainly was due to the authoritarian and illiberal character of the system of government, which combined paternalism with repression and exclusion.¹³

As a consequence of the labor movement's size and strength, large parts of the German bourgeoisie felt especially challenged and deeply threatened. They became highly defensive and moved to the right, aligning themselves with the old elites and the political status quo. They lost sight of the universalist promises of the as-yet-unfulfilled project of civil society, which were so clearly contradicted by social reality. While the socialist labor movement attacked central elements of this project (particularly the capitalist market economy), it was firmly committed to others: civil rights, equal opportunity, public criticism, democratization. At the end of the nineteenth century and the beginning of the twentieth, the project of civil society lost part of its middle-class support but gained some working-class allies, who, however, tended to change the project by claiming its principles for themselves. A similar argument could be made with respect to feminist demands and movements, which were much weaker then but would become very powerful in the second half of the twentieth century.

Since then the class constellation has deeply changed. While class formation was the dominant trend up to the First World War, counter-tendencies gained the upper hand from the interwar period onward, tending rather to class fragmentation or dissolution. The labor force changed. As Table 2 shows, the relative weight of the blue-collar sector has strongly declined. From the 1960s onward, it started to shrink even in absolute numbers. Working-class culture had always been a blue-collar phenomenon, part of the world of skilled manual workers. The shift toward salaried white-collar and professional jobs was bound to change the equation. Working-class culture and institutions deeply suffered under the Nazi dictatorship. Terror and war, the bombing of the cities, and the violent reshuffling of German society and culture as consequences of war and defeat, mass migration, and population transfer further contributed to the weakening of traditional class structures. Above all, unprecedented economic growth from the 1950s to the 1980s, democratization and the success of the welfare state, the rise of consumerism and mass culture, the changing balance between work and leisure, cultural shifts, the blurring of social inequality patterns, and the "individualization" of life chances – all these strongly contributed to the erosion of class identifications. This was particularly the case in West Germany: economic growth, consumerism and democratization were less important or entirely lacking in East Germany. But there the abandoning of market principles and dictatorial communist rule resulted in the destruction of the traditional class system in an even more thorough way. The working class has not disappeared in Germany, but the relative importance of class as a factor determining wealth, status and power, belonging and social distance, self-identification and cultural orientation has strongly declined. Class is much less important today than it was at the start of the century.¹⁴

Crisis and success, expansion and erosion have characterized the history of the bourgeoisie since the First World War. The dissolution of the working class has deprived the bourgeoisie of its major remaining opponent. On the other hand, the distinction between aristocracy and bourgeoisie had already lost most of its legal importance by 1918/19 and subsequently lost any remaining political and social meaning. The aristocracy has lost all of its privileges and ceased to be the powerful ruling elite it had been for many centuries. In a way, the bourgeoisie has outlived its opponents; but without them it has also lost part of its identity.

The salaried bourgeoisie outnumbers the self-employed bourgeoisie. Bureaucratization has left its mark. The notion of bourgeois independence has changed. Ever since the First World War, the number of servants in bourgeois households has steadily declined; servants had been of the utmost importance to nineteenth-century bourgeois families. Clas-

sical education became marginal, giving way to more specialized forms of training, and this change dissolved an important element of cultural unity within the bourgeoisie. The culture of work and thrift, of progress and order that defined large parts of the rising bourgeoisie in the earlier parts of the nineteenth century has largely disappeared. The most central institution of bourgeois culture, the family, has changed tremendously, as a clear separation of gender roles had been essential to it. Gender relations have changed thoroughly. Other influences also had an effect: for example, the changing status of youth, the rise of the media, and the multiplication of choices available in modern society. As a result, the family has lost many of its nineteenth-century functions and part of its inner cohesion, with disintegrative effects on bourgeois culture. The two German dictatorships (the Third Reich and the German Democratic Republic) have contributed much to the destruction of bourgeois strongholds, traditions, and values.

At the same time, surviving features of bourgeois culture have spread widely to all parts of the upper strata, to a certain extent to the shrinking rural population, to the middle masses that used to be called "lower-middle class" (*"Kleinbürgertum"*), and even to parts of the working class. After the end of the Nazi dictatorship and the breakdown of 1945, with the economic improvement and the social reconstruction of the 1950s, there was even something like a partial renaissance of bourgeois values and practices in the Federal Republic. The same may happen in eastern Germany in the years to come, although the removal and destruction of bourgeois structures and traditions in the forty years of the GDR were much more thorough and lasting than what happened in the twelve years of the Third Reich. Certainly, there continue to be economic and social limits to the spread of bourgeois culture. But bourgeois culture, which always had a built-in tendency toward universalization, has moved far beyond the social group where it originated and which it once helped to define.

The descriptive and analytical power of the concepts "bourgeoisie" (*"Bürgertum"*) and "working class" (*"Arbeiterklasse"*) is limited in relation to patterns of social inequality and conflict in the present. Certainly the class basis of the project of civil society has been loosened, weakened, eroded. Maybe this is one of the reasons why this project is doing relatively well today.¹⁵

Twentieth-Century Turning Points

1918/19 was a profound turning point in German societal history that started as a dictated reform from above – parliamentarization by order of the Army High Command under the pressure of an inevitable defeat in

October 1918 – continued as a spontaneous revolution from below (November 1918), and led to fundamental reforms as well as widespread violence and civil war (1919/20). Certain revolutionary objectives clearly aimed beyond the model of civil society, and were partly directed against it, but largely failed: for example, attempts at thorough socialization and experiments with nonrepresentative forms of direct democracy outside a constitutional framework. As things turned out, the revolution advanced the cause of civil society in Germany by leading to a liberal constitution, a parliamentary system, the first really democratic elections (including suffrage for women), basic social reforms that included new mechanisms of conflict resolution, and an important broadening of the political elite. But in this last respect as well as others, it remained halfhearted. It allowed a considerable (and crucial) degree of political, cultural, and socioeconomic continuity. Too much of the *ancien régime* survived. At the same time, the revolution was disruptive, violent, and radical enough to produce deep frustration, hardship, and rejection at both extremes of the political spectrum. Both the continuity permitted and the wounds inflicted by the revolution burdened and delegitimized the model of civil society it had brought to life.

There were other burdens, of course: the consequences of a war that had ended not only in defeat but in national humiliation, economic disturbances and particularly inflation, hardship and new forms of social inequality; the widespread ineffectiveness of the new system; insufficient time for mental adjustment; depression. This is not the place to retell the story of the hopes and failures of the Weimar Republic. It succeeded in realizing the principles of a civil society to an extent unprecedented in Germany and laid the foundations for new civil traditions that eventually could be built upon in West Germany. But at the same time, the Weimar model of civil society was widely rejected by large segments of the bourgeoisie and the lower middle classes on the right as well as by the communist segment of the working class, while Social Democracy belonged to its few and increasingly helpless supporters. New radical mass movements with totalitarian ambitions had emerged from the First World War, both on the left and on the right. They grew and represented a deadly threat to the reality and the principles of civil society. Lack of acceptance, outright hostility, and internal deficiencies reinforced one another: a civil society in crisis.¹⁶

1933 brought the Weimar experiment with civil society to an end, on the basis of a coalition between old upper strata (including large parts of the bourgeoisie) and the new fascist mass movement on the right. There has been much debate about whether 1933 can be seen as a revolution. Perhaps. There also has been a heated debate on the question of whether the National Socialist period brought not only suppression, terror, war,

and catastrophe to Germany, Europe and the World but also – in the long run – some modernization to German society, intentionally or otherwise. Advocates of this view may have a point and are not necessarily apologetic. Modernization can be catastrophic; its meaning is not necessarily positive and often is vague. In addition one should not exclude the possibility that actions and processes destructive and devastating in the short term can sometimes have liberating and even beneficial effects in the long run (which does not, of course, justify them morally).¹⁷

However, it is quite clear what 1933 meant with respect to the history of civil society in Germany. It brought a dictatorship that was an outright negation of nearly all the principles of civil society. It built on illiberal and authoritarian, racist, anti-Semitic and imperialistic traditions of German history dating far back into the nineteenth century, that is, on older deficits of civil society in Germany. These deficits explain why German civil society could not mobilize more forces of resistance against the temptation of fascism. But in many respects, particularly in its most destructive features, German fascism presupposed the disintegration of older structures and traditions. It was something new; it grew out of a totalitarian mass movement born in the First World War. The Nazi period brought the “German divergence from the West” to its apex. It was the period when the distance between the German bourgeoisie and the project of civil society reached its historical peak. But the dictatorship destroyed a vital and central part of the German bourgeoisie, its Jewish component. In this and other respects, it severely damaged not only the model of civil society but also – despite bourgeois support for the rise and rule of National Socialism – the strength, the culture, the principles, and the mission of the bourgeoisie. (A similar point has been made with respect to the working class, above. It could also be made with respect to other social groups and institutions, particularly the aristocracy and the army.)

After 1945, the fundamentals of a civil society were reintroduced to West Germany. They were firmly established, and this time they have worked, so far. This is not the place to summarize the history of the Federal Republic of Germany, its difficult start in the postwar years under the influence of the Western allies, the restructuring of its elites (partly a restoration), its economic success, its slow and painful coming-to-terms with its National Socialist heritage, the successful history of its parliamentary institutions and of its party system (which largely broke with older traditions), its early orientation toward the West and later its cautious reconciliation policy toward the East, the gradual development of an open society and complicated rise of a relatively liberal culture (with many setbacks), its legitimacy and support among large parts of the population, this time including the upper strata and the bourgeoisie. In the

FRG, the long and problematic "German divergence from the West" came to an end.¹⁸

Certainly, one must not overlook the dark sides. The legacy of the National Socialist past continued, and continues, to be a heavy burden. The inherent problems of a modern civil society are immense, ranging from intolerable forms of deprivation and inequality to the loss of meaning and the ecological crisis. The future is hard to predict. And Germany was divided. While this may have helped the Federal Republic to solve some of its problems and avoid others, it also meant the loss of the German nation-state and, following from that, insecurity about collective identity and political culture. The confrontation with communist East Germany may have helped to stabilize the FRG, but it also cramped its political culture and threatened its civility. The division also meant that the Eastern part of Germany remained under dictatorial rule, which was certainly different from and less devastating than the previous (Nazi) dictatorship but again a negation of civil society and, simultaneously, a continuation of old authoritarian and illiberal traditions that the Federal Republic tried to overcome.

Still, despite such limitations and other drawbacks, compared to previous periods of German history and to other countries, the record of the FRG between 1949 and 1990 was relatively successful. At least this holds true with respect to the criteria used in this essay. While much remains to be done, major principles of a civil society were translated into reality by the Federal Republic, more than in any previous period of German history.

The last major turning point¹⁹ within German history – 1989/90 – is sometimes seen as a revision and correction of what the turning point of 1945/49 had brought. According to this view, the turning point of 1945/49 primarily led to the loss of the German nation-state and started more than forty years of a new German anomaly, the life of a nation in two states. The turning point of 1989/90 restored the German nation-state, though not in its old territorial extension. It brought the German division, together with the division of Europe, to an end. The turning point of 1989/90 thus corrected the decisions of 1945/49. This is how the relationship between the last two German turning points can appear if interpreted from the perspective of the history of the nation-state.

In the framework of societal history, however, the picture looks different. From the point of view of the history of civil society, the break of 1989/90 – the revolution in the GDR, its transformation into a movement for unification with the FRG, and the accession of the GDR to the FRG – appear to be the completion, not the correction, of 1945/49. It extended the system of the West to Germans in the East, who opted for it by a large majority. It opened up the opportunity to include the East

Germans into a relatively successful development toward civil society from which they had been excluded. Whether and how this will work remains to be seen. It is unlikely that the new Federal Republic of Germany will be merely a continuation of the old one. The ability to change peacefully is one of the strengths of civil society.

Table 1 German Labor Force by Economic Sector, 1800-1993
(selected years)

| | Agriculture (percent) | Industry (percent) | Services (percent) | Total (in millions) |
|------|--------------------------|-----------------------|-----------------------|------------------------|
| 1800 | 62 | 21 | 17 | 11 |
| 1849 | 56 | 24 | 20 | 15 |
| 1875 | 50 | 29 | 21 | 19 |
| 1907 | 35 | 40 | 25 | 28 |
| 1939 | 25 | 41 | 34 | 36 |
| 1970 | 9 | 49 | 42 | 26 |
| 1990 | 4 | 40 | 56 | 29 |
| 1993 | 3 | 39 | 58 | 36 |

Note: "Agriculture" includes agriculture, forestry, and fishery. "Industry" includes crafts, manufacturing, mining, and construction. "Services" includes commerce, traffic and transportation, and services. The figures for 1800 and 1875 relate to the population on the territory of the empire of 1871. All other figures relate to the empire and the Federal Republic (changing boundaries). The figures for the GDR in 1970: 13% agriculture, 49% industry, and 38% services (total labor force: 8 million).

Sources: W. Fischer et al., *Sozialgeschichtliches Arbeitsbuch* (Munich, 1982), vol. 1, pp. 52f.; Statistisches Bundesamt, *Bevölkerung und Wirtschaft 1872-1972* (Stuttgart, 1977), p. 142; R. Rytlewski and M. Opp de Hipt, *Die Deutsche Demokratische Republik in Zahlen 1945/49-1980* (Munich, 1987), p. 66; Statistisches Bundesamt, *Statistisches Jahrbuch 1992 für die Bundesrepublik Deutschland* (Stuttgart, 1992), p. 114; idem, *Statistisches Jahrbuch 1995 für die Bundesrepublik Deutschland* (Stuttgart, 1995), p. 108.

Table 2 German Labor Force by Position, 1882-1993 (selected years)

| | Self-Employed (percent) | Family Helpers (percent) | White-Collar/ Salaried (percent) | Blue-Collar Workers (percent) | Total (in millions) |
|------|----------------------------|-----------------------------|--|-------------------------------------|---------------------------|
| 1882 | 28 | 10 | 6 | 56 | 19 |
| 1907 | 20 | 15 | 10 | 55 | 28 |
| 1925 | 17 | 17 | 17 | 49 | 32 |
| 1933 | 16 | 16 | 17 | 50 | 32 |
| 1950 | 14 | 17 | 22 | 47 | 22 |
| 1960 | 12 | 10 | 28 | 50 | 27 |
| 1970 | 10 | 7 | 36 | 47 | 27 |
| 1980 | 9 | 3 | 46 | 42 | 27 |
| 1990 | 9 | 2 | 52 | 37 | 29 |
| 1993 | 9 | 1 | 53 | 37 | 36 |

Note: The German categories: Selbständige; Mithelfende Familienangehörige; Beamte und Angestellte; Arbeiter. Regarding territorial extension and sources, cf. note, Table 1; regarding the different categorization in the GDR, cf. R. Rytlewski and M. Opp de Hipt, *Die Deutsche Demokratische Republik in Zahlen 1945/49-1980* (Munich, 1987), p. 67.

Sources: As in Table 1 and Statistisches Bundesamt, *Statistisches Jahrbuch 1981 für die Bundesrepublik Deutschland* (Stuttgart, 1981), p. 95. Regarding the different categorization in the GDR, cf. Rytlewski and Opp de Hipt, *Die Deutsche Demokratische Republik*, p. 67.

Table 3 German Population by Size of Residential Community, 1819-1993 (selected years)

| | Community Size | | | | |
|------|---------------------|------------------|-------------------|--------------------|----------------------|
| | Fewer than 2,000 | 2,000- 10,000 | 10,000- 50,000 | 50,000- 100,000 | More than 100,000 |
| 1819 | 91 | | 5-6 | 1-2 | 1-2 |
| 1830 | 92 | | 5 | 1-2 | 1-2 |
| 1871 | 62 | 19 | 9 | 5 | 5 |
| 1890 | 49 | 19 | 12 | 4 | 16 |
| 1910 | 35 | 19 | 13 | 6 | 27 |
| 1933 | 30 | 18 | 12 | 6 | 35 |
| 1950 | 25 | 21 | 17 | 6 | 31 |
| 1970 | 19 | 21 | 21 | 7 | 32 |
| 1987 | 6 | 20 | 32 | 9 | 33 |
| 1993 | 9 | 19 | 31 | 9 | 32 |

Note: The figures for 1819 and 1830 are for the population of the German Federation, excluding Austria and Luxemburg. All other figures relate to the empire and the Federal Republic (changing boundaries). In 1970, 26% of the population of the GDR lived in communities with less than 2, 000 inhabitants; 52% in communities with 2,000 to 100,000; and 22% in communities with more than 100,000.

Sources: J. Kocka, *Arbeitsverhältnisse und Arbeiterexistenzen: Grundlagen der Klassenbildung im 19. Jahrhundert* (Bonn, 1990), p. 54; Statistisches Bundesamt, *Statistisches Jahrbuch 1981 für die Bundesrepublik Deutschland* (Stuttgart, 1981), p. 94; R. Rytlewski and M. Opp de Hipt, *Die Deutsche Demokratische Republik in Zahlen 1945/49-1980* (Munich, 1987), p. 47; Statistisches Bundesamt, *Statistisches Jahrbuch 1988 für die Bundesrepublik Deutschland* (Stuttgart, 1988), p. 60; idem, *Statistisches Jahrbuch 1995 für die Bundesrepublik Deutschland* (Stuttgart, 1995), p. 58f.

Notes

1. Cf. G.G. Iggers, *New Directions in European Historiography*, rev. ed. (Middletown, CT, 1975), pp. 80-122; G.A. Ritter, *The New Social History in the Federal Republic of Germany* (London, 1991); J. Kocka, "Social History in Germany," *Tijdschrift voor Sociale Geschiedenis* 23 (1997): 137-146.
2. Cf. F. Braudel, "Histoire et Science Sociale: La Longue Durée," *Annales. Economie, Société, Civilisation* 13 (1958): 725-753; E. Hobsbawm, "From Social History to the History of Society," *Historical Studies Today: Daedalus* 100/1 (Winter 1971): 20-45; H.-U. Wehler, *Geschichte als Historische Sozialwissenschaft* (Frankfurt am Main, 1973); J. Kocka, "Sozialgeschichte – Strukturgeschichte – Gesellschaftsgeschichte," *Archiv für Sozialgeschichte* 15 (1975): 1-42; Ch. Tilly, *As Sociology Meets History* (New York, 1981).
3. Cf. K. Hildebrand, "Geschichte oder 'Gesellschaftsgeschichte'. Die Notwendigkeit einer Politischen Geschichtsschreibung von den internationalen Beziehungen," *Historische Zeitschrift* 223 (1976): 328-57. But cf. G.G. Iggers, ed., *The Social History of Politics. Critical Perspectives in West German Historical Writing Since 1945* (Leamington Spa, 1985).
4. Cf. K. Hausen, ed., *Frauen suchen ihre Geschichte* (Munich, 1983); G. Bock, "Geschichte, Frauengeschichte, Geschlechtergeschichte," *Geschichte und Gesellschaft* 14 (1988): 364-391; U. Frevert, "Mann und Weib, und Weib und Mann". *Geschlechterdifferenzen in der Moderne* (Munich, 1995); G.-F. Budde, "Das Geschlecht der Geschichte," *Geschichte zwischen Kultur und Gesellschaft*, Th. Mergel and Th. Welkopp, ed., (Munich, 1997), pp. 125-150.
5. The debate reached a climax in 1984. Cf. F.J. Brüggemeier and J. Kocka, ed., "Geschichte von unten – Geschichte von innen." *Kontroversen um Alltagsgeschichte* (Hagen, 1986). Cf. A. Lüdtke, ed., *Alltagsgeschichte. Zur Rekonstruktion historischer Erfahrungen und Lebensweisen* (Frankfurt am Main, 1989).
6. Cf. H. Medick, "Missionare im Ruderboot? Ethnologische Erkenntnisweisen als Herausforderung an die Sozialgeschichte," *Geschichte und Gesellschaft* 10 (1994): 295-319; H. Lehmann, ed., *Wege zu einer neuen Kulturgeschichte* (Göttingen, 1995); R. Sieder, "Sozialgeschichte auf dem Weg zu einer historischen Kulturwissenschaft?" *Geschichte und Gesellschaft* 20 (1994): 445-468; W. Hardtwig and H.-U. Wehler, ed., *Kulturgeschichte Heute* (Göttingen, 1996); U. Daniel, "Clio unter Kulturschock. Zu den aktuellen Debatten der Geschichtswissenschaft. Teil 1," *Geschichte in Wissenschaft und Unterricht* 48 (1997): 195-219; Ch. Conrad and M. Kessel, ed., *Kultur & Geschichte. Neue Einblicke in eine alte Beziehung* (Stuttgart, 1998). There are more radical, and less productive, challenges to societal history, questioning contextualization and advocating radical deconstruction of systematic concepts, in a postmodern mood. I leave this aside.
7. Cf. Th. Nipperdey, "Probleme der Modernisierung in Deutschland," *Saeculum* 30 (1979): 292-303; E. Engelberg and W. Küttler, ed., *Formationstheorie und Geschichte* (Berlin, 1978); R. Rürup, "Deutschland im 19. Jahrhundert 1815-1871," in *Deutsche Geschichte*, vol. 3, ed. Rürup et al. (Göttingen, 1985), pp. 3-200; J. Kocka, *Facing Total War. German Society 1914-1918* (Leamington Spa, 1984); H.-U. Wehler, *Deutsche Gesellschaftsgeschichte*, 3 vols. (Munich, 1987, 1995).
8. Cf. the chapter on "Bürgertum and Civil Society" in: J. Kocka, "The European Pattern and the German Case," *Bourgeois Society in Nineteenth-Century Europe*, ed. idem and A. Mitchell (Oxford/Providence, RI, 1993), pp. 8-15; J. Keane, ed., *Civil Society and the State. New European Perspectives* (London, 1988); K. Michalski, *Europa und die Civil Society. Castelgandolfo-Gespräche 1989* (Stuttgart, 1991) (contributions by E. Shils, Ch. Taylor, R. Dahrendorf and B. Geremek, among others).

9. Cf. D. Blackbourn, *The Long Nineteenth Century* (London, 1997); J.J. Sheehan, *German History 1770-1866* (Oxford, 1989); D. Blackbourn and G. Eley, *The Peculiarities of German History. Bourgeois Society in Nineteenth Century Germany* (Oxford, 1984).
10. Cf. chapters 9 and 11 above.
11. Cf. J. Kocka, "Arbeiterbewegung in der Bürgergesellschaft," *Geschichte und Gesellschaft* 20 (1994): 487-496; idem, "New Trends in Labour Movement Historiography: A German Perspective," *International Review of Social History* 42 (1997): 67-78.
12. Statistical data can be found in: W. Fischer et al., *Sozialgeschichtliches Arbeitsbuch*, vol. 1 (1815-1870) (Munich, 1982); G. Hohorst et al., *Sozialgeschichtliches Arbeitsbuch*, vol. 2 (1870-1914), 2nd ed. (Munich, 1978); D. Petzina et al., *Sozialgeschichtliches Arbeitsbuch*, vol. 3 (1914-1940) (Munich, 1978).
13. Cf. K. Tenfelde, "Germany," in *The Formation of Labour Movements 1870-1914. An International Perspective*, M. van der Linden and J. Rojahn, ed., (Leiden, 1990), vol. 1, pp. 243-269.
14. Cf. J. Mooser, *Arbeiterleben in Deutschland 1900-1970. Klassenlagen, Kultur und Politik* (Frankfurt am Main, 1984).
15. Cf. H. Siegrist, "Ende der Bürgerlichkeit?" *Geschichte und Gesellschaft* 20 (1994): 549-593; K. Tenfelde, "Stadt und Bürgertum im 20. Jahrhundert," in *Wege zur Geschichte des Bürgertums*, idem and H.-U. Wehler, ed., (Göttingen, 1994), pp. 317-353.
16. Cf. V.R. Berghahn, *Modern Germany. Society, economy and politics in the twentieth century* (Cambridge, England, 1982); H.A. Winkler, *Weimar 1918-1933. Die Geschichte der ersten deutschen Demokratie* (Munich, 1993).
17. Cf. M. Prinz and R. Zitelmann, ed., *Nationalsozialismus und Modernisierung* (Darmstadt, 1991).
18. Cf. J. Kocka, "Asymmetric Historical Comparison: the Case of the German 'Sonderweg,'" *History and Theory* 38 (1999): 40-51.
19. Cf. C. Stern and H.A. Winkler, ed., *Wendepunkte deutscher Geschichte*, rev. ed. (Frankfurt am Main, 1994).

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Industrial Culture & Bourgeois Society

Business, Labor, and Bureaucracy in Modern Germany

Jürgen Kocka
Introduction by Volker R. Berghahn

Jürgen Kocka is one of the foremost historians of Germany, whose work has been devoted to integrating the social and economic history of Europe in the period of industrialization. This collection of essays represents his efforts to develop new and powerful analytical tools for understanding the dynamics of modern industrial societies. It includes essays that reflect his groundbreaking study of the electrical engineering firm Siemens, from the standpoint of family relations, bureaucratic structures, and entrepreneurial competition; essays that trace the rise of the middle class and working class in Germany, putting them in social context; and essays that assess the impact of industry and bureaucracy on our definition of culture and civil society.

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